

**FRAMING VIOLENCE:
THE EFFECT OF SURVEY CONTEXT AND QUESTION
FRAMING ON REPORTED RATES OF PARTNER
VIOLENCE**

**by
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Abstract

In this dissertation, I investigated two explanations for the variability in levels of partner violence found by large community surveys. In Study 1, I examined the effect of how questions about partner violence are introduced (question framing: conflict, violence-in-relationships, or attacks) on reports of partner violence. Although there was not a reliable effect of question framing, the pattern of findings was consistent across 3 of 4 analyses. Counter to predictions, an attacks question framing yielded highest reported levels of violence and a conflict framing yielded lowest levels. In Study 2, I examined the effect of the overall nature of the survey (survey framing: family life and relationships, personal safety, or crime) on reports of partner violence. There was a significant effect of survey framing; however, the direction of effects was counter to predictions with reported levels highest using a personal safety survey framing. To clarify these findings, in Study 3, I investigated the effect of survey form on reports of partner violence, with survey and question framing paired as typically seen in community surveys (family life and relationships survey framing with conflict question framing, personal safety survey framing with violence question framing, crime survey framing with attacks question framing). Although there was not a reliable effect of survey form, the pattern of rates and means was consistent across analyses. Participants reported highest levels of violence with the personal safety-violence form and lowest levels with the family life-conflict form. Overall, the findings suggest that although the nature of the survey used appears to influence reports of partner violence, other contextual factors likely also play a role.

Keywords: partner violence; survey research; framing; measurement

Subject Terms: Intimate Partner Violence; Partner Abuse; Surveys; Methodology;

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Dedication

for Keith

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Introduction

Over the last three decades, numerous large surveys have assessed the prevalence of partner violence in various populations. Some of these surveys have found relatively high rates of partner violence, and others have found relatively low rates of partner violence. For example, the National Family Violence Survey (NFVS; Straus & Gelles, 1986) found that 12% of women reported marital violence in the past year, whereas the US National Violence Against Women Survey (NVAW; Tjaden & Thoennes, 2000) found that 1.3% of women reported having been victimized in the past year. Further, some surveys indicate that the victims of partner violence are overwhelmingly women; in contrast, many others find that women perpetrate partner violence at rates similar to, or slightly higher than, men. For example, the US National Crime Victimization Survey (NCVS; Rennison, 2003) found that women were more than five times as likely to be victims of partner violence as were men, whereas the National Youth Survey (NYS; Morse, 1995) found that women and men reported similar rates of victimization. These disparate findings need to be reconciled so that policy makers can make more informed decisions about public funding for social programs aimed at partner violence.

Although researchers have theorized about reasons for differing prevalence rates of partner violence, the issue has not been systematically investigated. Therefore, I examined how features of the surveys themselves may influence reported rates of partner

violence. Specifically, I focused on how the context of the survey (survey framing), as well as the introduction of the partner violence questions (question framing), can influence these rates. In a review of the literature, I identified three types of survey framing (crime victimization, personal safety, and family life) and three types of question framing (conflict, violence-in-relationships, and attacks). I examined the effects of both types of framing on reported rates of partner violence.

By clarifying the effects of survey and question framing on reported rates of partner violence, these findings could help guide the development of more valid measures of prevalence of partner violence. Data obtained about partner violence play an important role in shaping social policy (Smith, 1994). Accurate assessment of the prevalence and severity of the problem of violence in relationships is required in order to adequately address the problem. For example, rates of partner violence found by large surveys may be used to justify and motivate government funding of programs to help victims of partner violence. Findings indicating that 20% of women are abused by their partners may lead to higher levels of funding than findings showing that 3% of women experience partner abuse.

Rates of Partner Violence

Reported rates of partner violence, as well as relative rates of male-to-female and female-to-male violence, vary considerably depending on the nature of the survey used to collect data. At one extreme, crime victimization surveys focus on respondents' experiences of crime and ask respondents if they have been attacked or threatened with

attack in any way. These surveys find relatively low prevalence rates of partner violence and large gender differences in these rates.¹ Overall, crime victimization surveys conducted since the 1990s find rates of women's receipt of partner violence in the last 12 months of about 0.6%; men's rates of receipt of partner violence are much lower, at 0.1%, on average (e.g., NCVS, Rennison, 2003; Canadian General Social Survey, Statistics Canada, 1990).

At the other extreme, surveys about family life frame questions about violent acts in a normative context, with partner violence questions presented to respondents as part of a general investigation of how couples resolve differences. These surveys often use the physical assault subscale of the Conflict Tactics Scales (CTS; Straus, 1979; Straus, Hamby, Boney-McCoy, & Sugarman, 1996), an act-based measure, to assess partner violence. The many community surveys using the CTS to assess violence obtain much higher prevalence rates of partner violence than crime victimization surveys and comparable rates for women and men. Overall, community surveys using the CTS find annual prevalence rates of about 10% for both men's and women's receipt of partner violence (e.g., Kwong, Bartholomew, & Dutton, 1999; see also Archer, 1999).

Between these two extremes are surveys that frame questions about partner violence in other ways (e.g., in the context of a survey about personal safety, or asking

¹ Whereas crime victimization surveys traditionally identified victims of assault by asking respondents if they have "been attacked or threatened with attack in any way" (e.g., Statistics Canada, 1990, p. 2), their usefulness as tools for measuring partner violence was criticized due to the use of single item questions regarding assaults and sexual assaults (see Johnson & Bunge, 2001; Smith, 1994). Consequently, more recent crime victimization surveys have typically included more specific wording or multiple items to measure partner violence, and typically rely on act-based items to assess partner violence. The present review focuses only on these more recent surveys.

about violence in the relationship). These surveys generally find prevalence rates that fall between those found by crime victimization surveys and family life surveys. These surveys, on average, find rates of receipt of partner violence for both men and women of about 3% (e.g., National Survey of Families and Households, Szinovacz & Egley, 1995).

In summary, crime victimization surveys find low rates of partner violence relative to family life surveys using the CTS and indicate that a greater proportion of women than men are victimized. In contrast, family life surveys using the CTS obtain much higher rates of partner violence, and find that rates of men's victimization are similar to rates of women's victimization. Surveys using other methods to measure partner violence find rates that fall in the middle and find similar rates of women's and men's victimization.

Potential Explanations for Differences in Rates of Partner Violence

Researchers studying the cognitive aspects of survey methodology have examined how question wording can affect responses. These researchers have consistently found that self-reports of behaviours and attitudes are strongly influenced by features of the research instrument, including question wording, format, and context (e.g., Schwarz, 1999; Smith, 1987). Schwarz and others (1999; Schwarz & Oyserman, 2001) argue that respondents draw on subtle information in surveys and questionnaires in order to determine their task and to arrive at answers that are useful and informative for researchers. In order for respondents to answer the question asked of them, they must first

understand it. According to Schwarz (1999), in addition to comprehending the literal meaning of a sentence (i.e., identification of words), respondents must also understand its pragmatic meaning (i.e., the questioner's intentions).

The substantive meaning of a question can be influenced by its wording and by the content of preceding questions (Schwarz, 1999; Schwarz, Strack, Hippler, & Bishop, 1991; Smith, 1987). The title of a questionnaire can also influence participants' perceptions of the issue under study and, consequently, their responses (Schwarz & Oyserman, 2001). Questions about past behaviours and about sensitive issues are particularly susceptible to these framing effects (Schwarz, 1999). For example, when Oyserman (unpublished data, cited in Schwarz & Oyserman, 2001) asked teens how often they "fight" with their parents, the teens reported lower rates of fighting when this question followed questions about delinquency than when it preceded them. Apparently, the teens interpreted the term "fight" to mean a physical altercation in which they hit their parents when the question was presented in the context of questions about stealing, gang fights, and so on, but not otherwise.

Given all the possible influences on participants' responses to survey questions, it is not surprising that different forms of surveys obtain different reported rates of partner violence. Researchers in the partner violence field have recently begun to address how features of the research instrument and other aspects of data collection methodology may influence participants' responses (see O'Leary, 2006; Rosenbaum & Langhinrichsen-Rohling, 2006). Such research has, however, generally focused on comparing differing methods of questionnaire administration (e.g., computer versus paper-and-pencil; Hamby,

Sugarman, & Boney-McCoy, 2006) and question ordering (e.g., Ramirez & Straus, 2006; Vega & O'Leary, 2006). Although no research has systematically addressed why different surveys find different prevalence rates of partner violence, researchers in the partner violence field have theorized that either the context of the survey or the framing of specific questions about partner violence may create demand characteristics that affect how people interpret their experiences of partner violence (e.g., Mihalic & Elliott, 1997; Straus, 1999; Tjaden & Thoennes, 2000).

Survey Framing

When participating in a crime victimization survey, it may not occur to respondents that their experience of partner violence is a crime (cf. Smith, 1994). Imagine, for example, being in a relationship and having been pushed by your partner in the course of an argument. Would you report this behaviour on a crime victimization survey, after having answered a series of questions about whether you have been the victim of property crime and threats or assaults by strangers? It would likely seem out of context to report being pushed by a partner on a survey that is clearly interested in serious criminal behaviour. Researchers have argued that when surveys are presented as a study of crime, personal safety, or violence, the overall framing of the survey can take precedence over specific instructions to include all assaults, regardless of who the perpetrator was and regardless of whether injury resulted (e.g., Straus, 1999). If respondents do not perceive milder acts of violence as a crime and therefore do not report them in crime victimization surveys, then these surveys may only reliably detect more

severe incidents of partner violence. In contrast, if you participated in a family life survey that asked questions about your relationship and about conflict, such as whether you and your partner argue about various issues or shout at each other, it would seem less out of context to report having been pushed by your partner during an argument. Researchers have suggested that family life surveys are conducive to respondents reporting both less severe and more severe acts of partner violence (e.g., Straus, 1999). Thus, the difference in survey framing could explain the different rates found by these different types of surveys.

Consistent with this speculation, crime victimization and personal safety surveys find high rates of injury among victims of partner violence (e.g., up to 42%, NVAW Survey, Tjaden & Thoennes, 2000) and high rates of police intervention in cases of domestic violence (e.g., the Canadian Urban Victimization Survey found that police intervened in 45% of incidents; Solicitor General Canada, 1985), suggesting that respondents tend to report more severe cases of partner violence in these surveys. This is in contrast to family life surveys, which find much lower rates of injury. For example, Stets and Straus (1990) found that 3% of women victims of partner violence reported needing to see a doctor as a result of violence. These findings suggest that the incidents reported on crime victimization surveys tend to involve more severe cases of violence than those reported on family life surveys.

There is also evidence to suggest that some women in violent relationships minimize the salience of their partners' abuse (e.g., Herbert, Silver, & Ellard, 1991). Some abused women may cognitively restructure their situation in such a way as to view

their relationships in a positive light. If this is indeed the case, it is unlikely that these women would report the violence they experience (particularly less severe violence) on a crime victimization survey: construing their partners' violence as a crime would be inconsistent with their positive views of their partner and relationship. Finally, evidence from couples requesting marital therapy (Ehrensaft & Vivian, 1996) and women currently in abusive relationships (e.g., Burke, Gielen, McDonnell, O'Campo, & Maman, 2001; Shurman & Rodriguez, 2006) indicates that some people may simply not see the violence in their relationship as a problem. If people do not see the violence in their relationship as a problem, they are unlikely to report it on a survey about criminal victimization.

This tendency to minimize reports of violence most likely exists for both genders, but may be even more pronounced for men's reports of victimization. Both women and men tend to see violent acts by women as less likely to constitute abuse and as less likely to be a crime as the same acts by men (e.g., Bethke & DeJoy, 1993; Simon et al., 2001; Sorenson & Taylor, 2005). Therefore, survey framing effects could be even stronger for men's reports of victimization than for women's reports of victimization.

Although there has been some general discussion in the partner violence field of how survey framing might influence reports of partner violence, I was able to find only one study that has examined the issue. Mihalic and Elliott (1997) analyzed data from the US National Youth Survey (NYS) to investigate the extent to which respondents were willing to report marital violence in a context that focused on criminal behaviours as opposed to a family life context. The NYS asked respondents whether they had been beaten up or attacked with a weapon by someone (crime victimization context) and

whether their spouse/partner had beaten them up or had used a knife or gun on them (family violence context). The criminal victimization context should capture attacks that occur both within and outside the respondents' relationship, whereas the family violence context would capture attacks by a spouse/partner only.

Mihalic and Elliott (1997) found that, depending on the item considered, 40 to 60 percent of respondents reporting violence in the family violence context failed to report it in the criminal victimization context. For example, prevalence rates for being "beaten up" were 2.8% in the family violence section of the survey and 1.6% in the criminal victimization section. Although these findings suggest that survey context influences reports of partner violence, the two contexts in the NYS also differed in question framing and item wording, making this conclusion tentative. The family violence section asked about having been beaten up or having a knife or gun used on oneself in the context of a series of less serious acts of violence (e.g., having been pushed), whereas the criminal victimization section did not ask about less serious acts. In addition, the criminal victimization section asked about having been *attacked* with a weapon by someone, whereas the family violence section asked about a spouse/partner having *used* a knife or gun on the respondent. Thus, is it not clear from Mihalic and Elliott's study whether the underreporting of partner violence seen in the crime victimization context of the NYS is due to survey context (crime vs. family life) or due to differences in question framing and/or question wording.

Question Framing

Tjaden and Thoennes (2000) have drawn attention to another potential explanation for differences in rates of partner violence across surveys, the framing of the violence questions themselves. Tjaden and Thoennes argue that the framing of specific questions about partner violence, rather than the overall survey context, may influence the rates of partner violence obtained by the survey. Surveys using the CTS (typically surveys about family life and relationships) introduce questions about partner violence with a "statement that acknowledges the pervasiveness of marital/partner conflict" (p. 31). According to Straus (1990), one of the reasons for originally presenting the CTS items as responses to conflict and disagreement was that the focus on conflict and disagreement enhances the acceptability of the CTS to respondents. This is because almost everyone agrees that couples have disagreements and conflicts, and these are seen as a normal part of relationships. Using a conflict and disagreement context to ask questions about partner violence also is consistent with research indicating that most relationship violence does in fact occur in the context of arguments (e.g., Capaldi & Crosby, 1997; Cascardi & Vivian, 1995). Thus, this approach may be more likely to result in disclosure of partner violence than an approach that focuses on being attacked by or assaulted by a partner.

The different ways of framing partner violence questions may help explain why surveys using the CTS obtain higher rates of partner violence than do various crime victimization and personal safety surveys. The way in which questions are framed could also help account for the discrepancy between rates of men's and women's victimization

found by CTS surveys and other surveys. If questions are presented to respondents in the context of relationship violence, then men may be less likely than women to report being victimized if they do not perceive certain acts of partner violence as "violence" (cf. Sorenson & Taylor, 2005). Given that question framing is embedded within the larger context of the survey as a whole, however, I hypothesized that the effect of question framing on reported rates of partner violence may not be as important as the effect of survey framing.

Current Study

Although both question framing and survey framing may affect reported rates of partner violence, the evidence for their effects is indirect. Unfortunately, question framing and survey framing are typically confounded. Surveys about family life generally introduce partner violence questions by discussing conflict (e.g., NFVS, Straus & Gelles, 1986), whereas crime victimization surveys generally ask about a broad range of victimization experiences and about having been attacked by a romantic partner (e.g., NCVS, Rennison, 2003). Personal safety surveys generally ask about feelings of safety in a variety of situations, and about violence in relationships (e.g., NVAW, Tjaden & Thoennes, 2000). Because of this, it is not clear which type of framing (or both) is a reasonable explanation for differing rates of partner violence, or the relative contribution of each. Therefore, I investigated both explanations by systematically manipulating both survey framing and question framing. I focused on three types of question framing (conflict, violence-in-relationships, and attacks) and three types of survey framing (crime

victimization, personal safety, and family life) that I identified in a review of partner violence surveys. Because question framing and survey framing tend to be confounded, I addressed each factor independently. In Study 1, I assessed the effect of question framing on reported levels of violence, and in Study 2, I examined the effect of survey framing on reported levels of partner violence.² Although past research has typically focused on rates of partner violence, this approach is limited because it does not take into account severity or frequency of violence. Therefore, I included a more sensitive measure of severity of partner violence in addition to the more traditional measure of violence rates.

² I took a two-study approach to examining the effect of question framing and survey framing independently, rather than using a factorial design, which would address both factors simultaneously. Because reported rates of partner violence in the literature are relatively low, particularly for crime victimization surveys, using a factorial design would have been impractical in terms of necessary sample size and would have resulted in violation of assumptions for statistical analyses.

Study 1: Question Framing

Study 1 focused on whether the wording that immediately precedes questions about partner violence on a survey influences levels of violence reported by respondents. Participants were randomly assigned to one of three question framings: conflict, violence-in-relationships, or attacks. The family life and relationships survey was chosen as the overall context within which to manipulate question framing because in prior research these types of surveys yield the highest rates of partner violence, and so would allow for the greatest possibility of variation in participants' responses.

Research Questions

1a. Does question framing impact reported levels of partner violence?

Based on past research and theory, I expected that participants assigned to the conflict framing would report higher rates of violence than those assigned to the violence-in-relationships framing, who in turn would report higher rates than participants assigned to the attacks framing. Further, I expected question framing to have a similar effect on reports of severity of violence.

1b. Are the effects of question framing moderated by gender?

Men may be less likely than women to perceive a partner's acts of violence as constituting abuse or a crime. Therefore, I expected question framing to have a stronger effect on men's than women's reports of partner violence.

Method

Participants

Criteria for inclusion were self-identification as heterosexual and current involvement in a romantic relationship of at least one month duration. Participants were 224 undergraduate university students (68% women, 32% men) with a mean age of 20.3 years ($SD = 3.4$, $Range = 17-46$). The reported relationship status of participants was as follows: 85% dating, 9% cohabiting, 3% married, and 2% other (e.g., engaged but not cohabiting). Mean relationship length was 23.7 months ($SD = 26.5$, $Range = 1-234$). The ethnic composition of the sample was primarily Chinese/East Asian (38%) and White/Caucasian (29%); respondents also self-identified as Canadian (7%), South Asian (7%), Middle Eastern (4%), Southeast Asian (4%), of Mixed ethnic origin (3%), and Other (2%). A number of participants (7%) did not indicate an ethnic background. There were no differences on demographic variables across framing conditions.

Procedure

Upon arrival in the lab, participants were greeted by a research assistant who seated them at a computer workstation. Participants were told they would be completing

an online survey about important life experiences and were given a password for the survey. They read an online consent form and indicated their consent by clicking on a link at the bottom of the online form. The consent form informed participants of the nature of the study and that they would be completing a survey via the Internet. They received information regarding the anonymity and confidentiality of their responses, and were informed that their participation was voluntary and they could withdraw from the study at any time. Participants were randomly assigned to a question framing condition. All surveys included the same questions about receipt of various acts of partner violence that may have taken place in the past year and/or ever in the past. After participants completed the survey, they were presented with an on-screen debriefing form describing the nature of the study and providing the researcher's contact information if they had any questions or concerns about the research.

Question Framing Manipulation

All participants completed a survey about "family life and relationships." Within this survey, participants were randomly assigned to one of three versions of the question framing manipulation (conflict, $n = 69$; violence-in-relationships, $n = 78$; attacks, $n = 77$). Table 1 shows the wording used to introduce the partner violence questions for each of the three question framing conditions. Question framings were adapted from community surveys that use each type of framing. The conflict question framing was drawn from the Vancouver Domestic Abuse Project (VDAP; Regan, Bartholomew, Kwong, Trinke, & Henderson, 2006); the violence-in-relationships question framing was drawn from the Canadian Violence Against Women Survey (VAWS; Statistics Canada, 1993); and the

attacks question framing was drawn from the 1999 General Social Survey (GSS; Statistics Canada, 2000). The question framing was followed by the partner violence questions, which were the same for all participants.

Table 1.

Question Framings

Framing	Introduction to Questions
Conflict	These next questions are about PHYSICAL CONFLICTS that may have arisen in your relationship(s). By this, I mean physical acts that have happened during conflicts with your romantic partner, and not play fighting or anything like that. Please indicate whether your romantic partner has ever done any of the following to you.
Violence-in-Relationships	These next questions are about people's experiences of VIOLENCE in their intimate relationships. Please indicate whether your romantic partner has ever done any of the following to you.
Attacks	These questions are about PHYSICAL ATTACKS by your romantic partner that you may have experienced. An attack can be anything from being hit, slapped or kicked, to being shot or beaten. Were you ever attacked by your romantic partner in any of the following ways?

Measure of Partner Violence

A 14-item measure based on the physical assault scale of the latest version of the CTS (CTS2, Straus et al., 1996) assessed participants' reports of receipt of physically violent acts (e.g., pushing, slapping, kicking) from a partner (see Table 2). In order to be consistent with crime victimization and personal safety surveys, an item about threats of being hit was added,³ as was an item about being bitten by one's partner. In addition, I combined two items about being threatened with a knife or gun and having a knife or gun used on oneself. For each violence item, participants were asked whether a partner had engaged in that behaviour toward them ever in the past. If they indicated that this had

³ In order to focus on acts of physical violence (as opposed to threats), this item was not included in the analyses reported here. However, all analyses were repeated with the threat item included and the pattern of results was consistent with that reported here.

occurred ever in the past, participants were asked whether a partner had engaged in that particular behaviour toward them in the last 12 months.

Table 2.

Physical Violence Acts

Has a partner ever...

1. threatened to hit you with his/her fist or anything else that could hurt you?
 2. thrown anything at you that could hurt you?
 3. pushed or shoved you?
 4. grabbed you?
 5. slapped you?
 6. twisted your arm or hair?
 7. bitten you?
 8. kicked you?
 9. punched you or hit you with something that could hurt you?
 10. slammed you against a wall?
 11. beaten you up?
 12. choked you?
 13. burned or scalded you on purpose?
 14. threatened you with or used a knife or gun on you?
-

Scoring of Partner Violence Measure

Lifetime and 12 month prevalence rates of partner violence were computed based on whether respondents reported receipt of at least one act of partner violence during that time-frame. Severity of partner violence was assessed by computing total scores (referred to as *variety scores*) for each time-frame by summing the number of different abusive acts endorsed. Variety scores have been shown to be reliable estimates of severity of abuse (Moffit et al., 1997): Total scores are highly correlated with measures of frequency

of violence and degree of injury (Regan et al., 2006; Regan, Bartholomew, Oram, & Landolt, 2002).

Data Analytic Approach

Research questions concerning rates of violence (a dichotomous outcome; i.e., receipt versus no receipt of violence) were tested using logistic regression models to determine the effects of the predictor variables on the odds of having experienced violence in a romantic relationship. Question framing (with the conflict framing as the indicator category) was entered on the first block, followed by gender on the second block and the gender-by-question framing interaction on the third block.

Outcome/criterion variables were receipt of partner violence ever in the past and in the last 12 months.

Research questions concerning severity of violence (a continuous outcome) were tested using two-way analysis of variance (ANOVA) models with question framing and gender (and their interaction) as independent variables. Dependent variables were severity of partner violence ever in the past and in the last 12 months.

I checked for associations between demographic variables (ethnicity, age and relationship length) and reports of partner violence. If any demographic variables were related to reports of partner violence, I conducted follow up analyses controlling for these.

Results

Results are presented separately for rates of violence and severity of violence, and for the two time-frames assessed. There were no associations between demographic variables and reports of partner violence.

Violence Rates

Overall, 37% of participants reported having been recipients of partner violence ever in the past. About a quarter of participants (24%) reported being the recipients of partner violence in the last year.

Ever in the Past

Reported rates of violence ever in the past are shown in Table 3 and the top panel of Figure 1. About 38% of participants in the conflict framing condition reported receipt of partner violence ever in the past, as did 33% of those in the violence framing condition and 40% of those in the attacks condition.

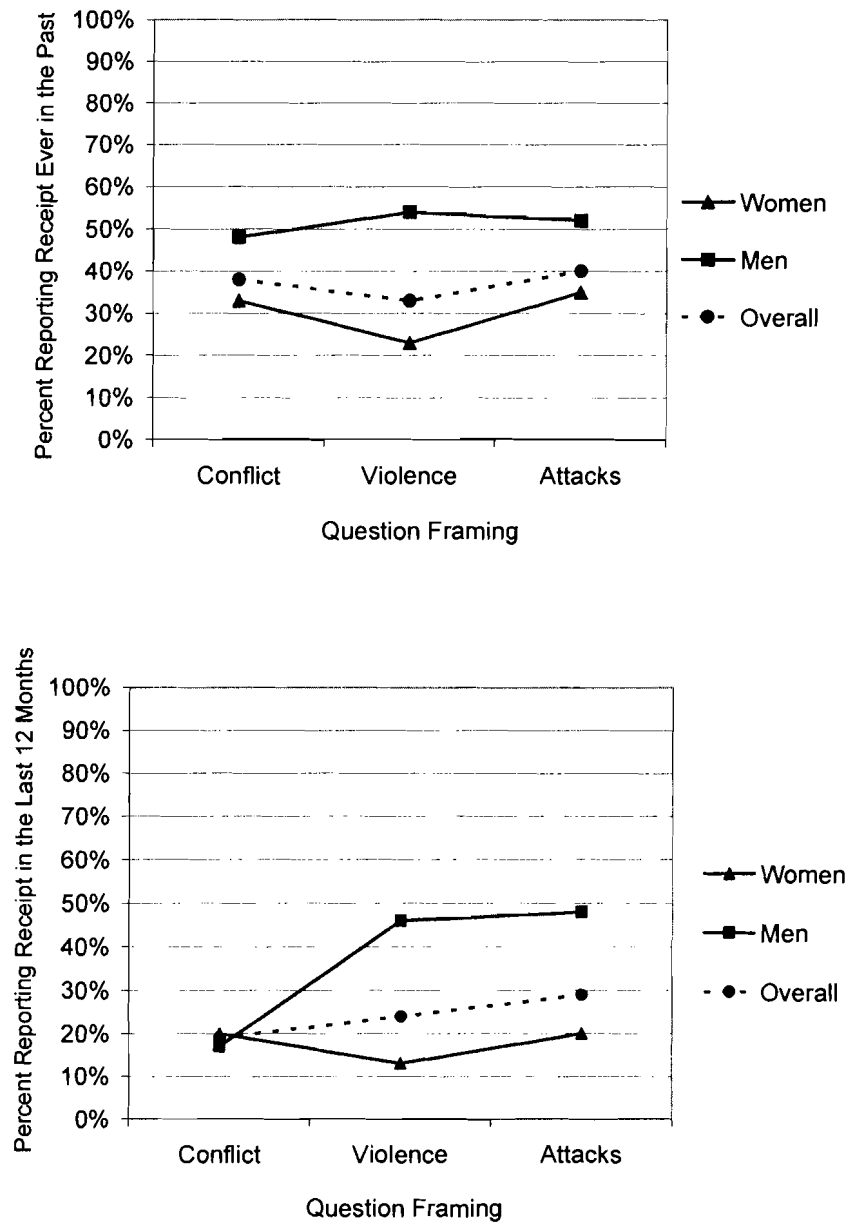
Table 3.

Study 1: Rates of Violence Ever in the Past and in the Last 12 Months by Question Framing and Participant Gender

Question Framing	Ever in the Past			Last 12 Months		
	Men <i>N</i> (%)	Women <i>N</i> (%)	Overall <i>N</i> (%)	Men <i>N</i> (%)	Women <i>N</i> (%)	Overall <i>N</i> (%)
Conflict	11/23 (47.8)	15/46 (32.6)	26/69 (37.7)	4/23 (17.4)	9/46 (19.6)	13/69 (18.8)
Violence	14/26 (53.8)	12/52 (23.1)	26/78 (33.3)	12/26 (46.2)	7/52 (13.5)	19/78 (24.4)
Attacks	12/23 (52.2)	19/54 (35.2)	31/77 (40.3)	11/23 (47.8)	11/54 (20.4)	22/77 (28.6)

Figure 1.

Study 1: Prevalence of Receipt of Partner Violence Ever in the Past and in the Last 12 Months by Question Framing



Results for the logistic regression predicting rates of violence ever in the past are shown in Table 4. A test of the question framing model versus a model with intercept

only was not statistically significant, $\chi^2 (2, N = 224) = .82, p = .665$, indicating that, contrary to predictions, question framing did not reliably distinguish between those participants reporting receipt of violence ever in the past and those not. This was confirmed by examination of the Wald statistics and odds ratios for the partial effects.

Table 4.

Study 1: Logistic Regression Models Using Question Framing, Gender and Gender-by-Question Framing Interaction to Predict Receipt of Partner Violence Ever in the Past

	Question Framing Model			Question Framing and Gender Model			Full Model		
	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)
Question Framing									
Conflict	--	--	--	--	--	--	--	--	--
Violence	-.19 (.35)	.30	.83 (.42, 1.63)	-.20 (.35)	.32	.82 (.41, 1.64)	.24 (.57)	.18	1.27 (.41, 3.92)
Attacks	.11 (.34)	.10	1.12 (.57, 2.17)	.15 (.35)	.18	1.16 (.59, 2.29)	.17 (.59)	.09	1.19 (.37, 3.79)
Gender^a									
				-.90 (.30)	9.33**	.41 (.23, .72)	-.64 (.52)	1.49	.53 (.19, 1.47)
Framing * Gender									
Violence vs. Conflict * Gender							-.72 (.73)	.97	.49 (.12, 2.05)
Attacks vs. Conflict * Gender							-.06 (.73)	.01	.94 (.23, 3.92)
Model χ^2									
	.82			10.24			11.45		
(df)									
	2			3			5		
p									
	.665			.017			.043		
R²^b									
	.005			.061			.068		

^a Male = 0. ^b R² refers to Nagelkerke R². ** $p \leq .01$.

Adding gender to the model in the second block significantly improved model fit, $\chi^2_{\text{change}}(1, N = 224) = 9.42, p = .002$. The fit of the model with gender included, when tested against an intercept-only model, was significant, $\chi^2(3, N = 224) = 10.24, p = .017$, indicating that this model reliably distinguished between those participants reporting receipt of violence ever in the past and those not. This was confirmed by examination of the Wald statistic and odds ratio, which showed that holding question framing constant, women were less than half as likely to report partner violence than were men.

Finally, adding the gender-by-question framing interaction to the model in the third block did not significantly improve model fit, $\chi^2_{\text{change}}(2, N = 224) = 1.22, p = .544$, suggesting that, contrary to predictions, the gender-by-question framing interaction had no reliable effect on reports of receipt of violence ever in the past. This was confirmed by examination of the Wald statistics and odds ratios for the partial effects.

Last 12 Months

Results for rates of violence in the last 12 months are shown in Table 3 and the bottom panel of Figure 1. About 19% of participants in the conflict framing condition reported receipt of partner violence in the last 12 months, as did 24% of those in the violence framing condition and 29% of those in the attacks framing condition.

Results for the logistic regression predicting rates of violence in the last 12 months are shown in Table 5. A test of the question framing model versus a model with intercept only was not statistically significant, $\chi^2(2, N = 224) = 1.92, p = .384$, indicating that, as for receipt of violence ever in the past, question framing did not reliably

distinguish between those participants reporting receipt of violence in the last 12 months and those not. This was confirmed by examination of the Wald statistics and odds ratios for the partial effects.

Table 5.

Study 1: Logistic Regression Models Using Question Framing, Gender and Gender-by-Question Framing Interaction to Predict Receipt of Partner Violence in the Last 12 Months

	Question Framing Model			Question Framing and Gender Model			Full Model		
	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)
Question Framing									
Conflict	--	--	--	--	--	--	--	--	--
Violence	.33 (.41)	.65	1.39 (.63, 3.07)	.34 (.42)	.68	1.41 (.63, 3.18)	1.40 (.68)	4.31*	4.07 (1.08, 15.33)
Attacks	.54 (.40)	1.87	1.72 (.79, 3.76)	.61 (.41)	2.24	1.84 (.83, 4.11)	1.47 (.69)	4.54*	4.35 (1.13, 16.85)
Gender ^a				-1.05 (.33)	10.36***	.35 (.19, .66)	.14 (.66)	.05	1.16 (.31, 4.25)
Framing * Gender									
Violence vs. Conflict * Gender							-1.85 (.87)	4.51*	.16 (.03, .87)
Attacks vs. Conflict * Gender							-1.42 (.85)	2.77†	.24 (.05, 1.29)
Model χ^2	1.92			12.26			17.29		
(df)	2			3			5		
p	.384			.007			.004		
R ^{2b}	.013			.080			.111		

^a Male = 0. ^b R² refers to Nagelkerke R². *** $p \leq .001$, * $p \leq .05$, † $p \leq .10$.

Adding gender to the model in the second block significantly improved model fit, $\chi^2_{\text{change}}(1, N = 224) = 10.35, p = .001$. The fit of the model with gender included, when

tested against an intercept-only model, was significant, $\chi^2(3, N = 224) = 12.26, p = .007$, indicating that this model reliably distinguished between those participants reporting receipt of violence in the last 12 months and those not. This was confirmed by examination of the Wald statistic and odds ratio, which showed that holding question framing constant, women were about a third as likely to report partner violence than were men.

This partial effect of gender was, however, completely moderated by a significant gender-by-question framing interaction. Although adding the interaction term to the model did not significantly improve model fit, $\chi^2_{\text{change}}(2, N = 224) = 5.03, p = .081$, the Wald statistics and odds ratios indicated a significant partial effect for the gender-by-violence (vs. conflict) interaction and a marginal partial effect for the gender-by-attacks (vs. conflict) interaction. Examination of the reported rates shows that controlling for question framing and gender, men, compared to women, were significantly more likely to report receipt of violence in the violence condition than in the conflict condition (see bottom panel of Figure 1). There was a similar, though non-significant, pattern in the attacks condition. Although I had predicted that question framing would have a stronger effect on men's reports of violence than on women's reports, the direction of the effect was counter to predictions.

Interestingly, the partial effects of question framing (both violence and attacks) were significant in the full model. The odds ratios indicated that controlling for gender and the gender-by-question framing interaction, participants in the violence and attacks

framing conditions were four times more likely than those in the conflict condition to report receipt of partner violence in the last 12 months.

Severity of Violence

On average, participants reported having received more acts of violence ever in the past ($M = .84$; $SD = 1.40$) than in the last 12 months ($M = .54$; $SD = 1.18$).

Ever in the Past

Mean levels of severity of violence ever in the past are shown in Table 6 and the top panel of Figure 2. Participants in the conflict framing condition reported receipt of an average of .71 acts of partner violence ever in the past; those in the violence framing condition reported receipt of an average of .81 acts of partner violence; and those in the attacks framing condition reported receipt of an average of .99 acts of partner violence ever in the past.

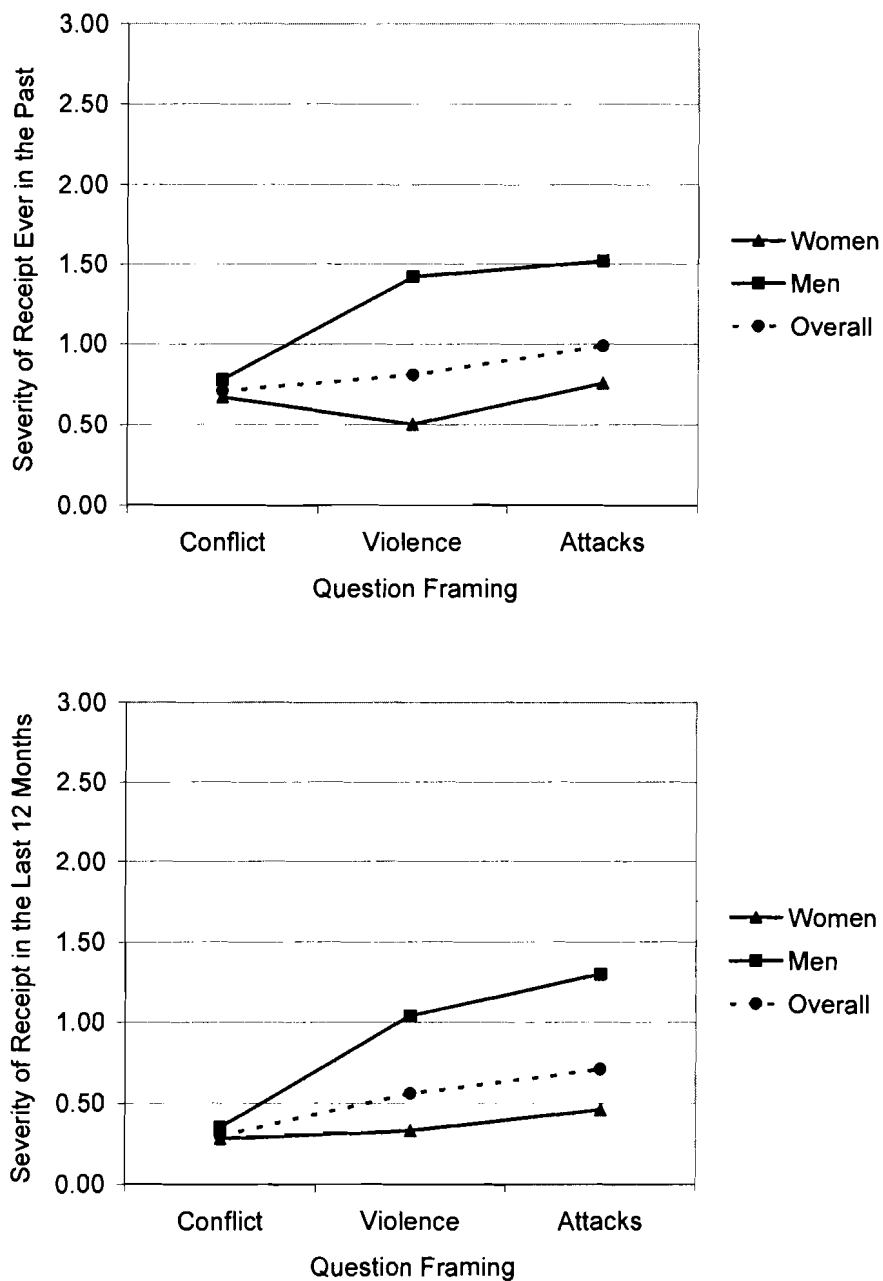
Table 6.

Study 1: Severity of Violence Ever in the Past and in the Last 12 Months by Question Framing and Participant Gender

Question Framing	Ever in the Past			Last 12 Months		
	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Overall <i>M (SD)</i>	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Overall <i>M (SD)</i>
Conflict	.78 (1.00)	.67 (1.14)	.71 (1.09)	.35 (.83)	.28 (.66)	.30 (.71)
Violence	1.42 (1.90)	.50 (1.09)	.81 (1.47)	1.04 (1.59)	.33 (.94)	.56 (1.23)
Attacks	1.52 (1.95)	.76 (1.33)	.99 (1.57)	1.30 (1.87)	.46 (1.09)	.71 (1.41)

Figure 2.

Study 1: Severity of Receipt of Partner Violence Ever in the Past and in the Last 12 Months by Question Framing



The ANOVA model indicated that, contrary to predictions, there were no significant differences in severity of violence across question framing conditions ever in

the past ($F(2, 218) = 1.43, p = .242$). There was a significant main effect of gender, with men reporting higher severity of receipt than women ($M_s = 1.25$ and $.64$ for men and women, respectively), $F(1, 218) = 9.28, p = .003$. There was no significant gender-by-question framing interaction ($F(2, 218) = 1.58, p = .208$).

Last 12 Months

Mean levels of severity of violence in the last 12 months are shown in Table 6 and the bottom panel of Figure 2. Participants in the conflict framing condition reported receipt of an average of .30 acts of partner violence in the last 12 months; those in the violence framing condition reported receipt of an average of .56 acts of partner violence; and those in the attacks framing condition reported receipt of an average of .71 acts of partner violence in the last 12 months.

The ANOVA model indicated that there was a significant main effect of question framing for number of acts of violence received in the last 12 months, $F(2, 218) = 4.01, p = .019$. Specifically, contrary to predictions, participants reported receiving the greatest number of violent acts in the attacks condition, fewer in the violence condition, and the fewest number of acts in the conflict condition. Post-hoc analyses using Tukey's HSD indicated, however, only a marginally significant difference between the attacks and conflict framing conditions ($HSD = .41, p = .09$). There was also a significant main effect of gender for number of acts of violence received in the last 12 months, with men reporting higher severity of receipt than women ($M_s = .90$ and $.36$ for men and women, respectively), $F(1, 218) = 10.90, p = .001$. There was no significant gender-by-question framing interaction ($F(2, 218) = 2.09, p = .126$).

Discussion

The present findings indicate that for the ever in the past time-frame, question framing did not meaningfully impact reported rates of partner violence or reported severity of partner violence, and that it did not have a differential impact by gender. The findings do indicate, however, that for the 12 month time-frame, question framing did impact reports of receipt of partner violence: There was a significant main effect of question framing on reported rates and severity of violence in the last 12 months. Specifically, contrary to predictions, reported rates and severity were highest in the attacks framing condition, lower in the violence framing condition, and lowest in the conflict framing condition.

Further, the findings suggest that question framing had little differential impact by gender on reports of receipt of partner violence in the last 12 months. Specifically, the gender-by-question framing interaction was significant only for rates of violence in the last 12 months. Inspection of Figure 1 shows that this was due to men reporting lower rates of receipt in the conflict condition than in the attacks and violence conditions, whereas women's reports did not differ across condition. Although the gender-by-question framing interaction for severity of violence in the last 12 months was not significant, inspection of Figure 2 suggests that the main effect for question framing was due to men's tendency to report more severe violence in the attacks and violence conditions than in the conflict condition. In contrast, question framing appears to have had relatively little effect on women's reports of severity in the last 12 months.

It is not clear why the main effect of question framing on reports of violence in the last 12 months was in the opposite direction than predicted. One possible explanation for lower reported rates in the conflict condition lies in the way the survey was presented to respondents. Specifically, as compared to the attacks and violence question framings, the conflict question framing is more consistent with the overall family life survey framing. In particular, the section of questions immediately preceding the partner violence questions assessed psychological abuse, also in the context of conflict, making the transition to the conflict framing for the violence questions relatively smooth. It is possible that the greater contrast between the family life survey and the attacks and violence question framings made the partner violence questions particularly salient for respondents. This may have resulted in stronger endorsement because participants thought more carefully about the questions and were then more likely to recall instances of partner violence.

Study 2: Survey Framing

Study 2 focused on whether the overall context of the survey influences rates of partner violence found by that survey. Participants were randomly assigned to one of three survey framings: family life and relationships, personal safety, or crime. The conflict question framing was chosen for use with all survey framings because in prior research the conflict framing yields the highest rates of partner violence, and so would allow for the greatest possibility of variation in participants' responses.

Research Questions

2a. Does survey framing impact reported levels of partner violence?

Based on past research and theory, I expected that participants would report highest rates of violence in the family life framing condition and lowest rates of violence in the crime victimization framing condition, with participants in the personal safety framing condition reporting rates in between the two. I expected a similar pattern for reports of severity of violence.

2b. Are the effects of survey framing moderated by gender?

Based on the same reasoning as presented in Study 1, I speculated that survey framing would have a stronger effect on men's than women's reports of partner violence.

Method

Participants

Criteria for inclusion were self-identification as heterosexual with romantic relationship experience ever in the past. The final sample consisted of 141 university students (65% women, 35% men). The mean age of the sample was 24.6 years ($SD = 7.5$, $Range = 17-67$). The majority of participants (75%) were currently in a romantic relationship, and a further 14% had been in a relationship in the past year. For participants currently in a romantic relationship, the reported relationship status was as follows: 65% dating, 19% cohabiting, 14% married, and 2% other.⁴ The ethnic composition of the sample was primarily White/Caucasian (40%) and Chinese/East Asian (30%); respondents also self-identified as Canadian (12%), Middle Eastern (4%), South Asian (4%), Southeast Asian (3%), of Mixed ethnic origin (3%), and Other (2%). A number of participants (3%) did not indicate an ethnic background. There were no differences on demographic variables across framing conditions.

Procedure

Rather than coming to the lab to complete the survey, Study 2 participants completed an online survey. Participants were recruited via on-campus advertising and were asked to contact the researcher via email to indicate interest in participation. A research assistant provided participants with a unique identity code, the link to the online

⁴ All analyses were redone with only those participants who had been in a relationship in the last year and with those currently in a romantic relationship. The pattern of results was generally consistent with what I report here.

questionnaires, and the password to access the online questionnaires. Participants were randomly assigned to a survey framing condition. Other than the fact that participants had no in-person contact with the researcher, the procedure for Study 2 was the same as for Study 1.

Survey Framing Manipulation

Survey framing was manipulated two ways. First, on the survey consent form, the title and brief description of the survey varied depending on survey framing condition. Second, three sections of questions preceding the partner violence questions differed depending on the survey framing.

Family life and relationships survey. Participants ($n = 44$) completing the family life and relationships survey were informed on the consent form that the survey was about family life and relationships. Three sections of questions asked participants about: 1) decision-making in their romantic relationship; 2) areas of disagreement in their relationship (adapted from the Dyadic Adjustment Scale [DAS]; Spanier, 1976); and 3) various ways of verbally resolving/dealing with disagreements with their partner (adapted from the CTS2; Straus et al., 1996).

Personal safety survey. Participants ($n = 43$) completing the personal safety survey were informed on the consent form that the survey was about personal safety. The first three sections of questions (based on the Canadian Violence Against Women Survey [VAWS]; Statistics Canada, 1993) asked about: 1) concerns about personal safety and

participants' attempts to make themselves feel safer; 2) receipt of face-to-face threats from a stranger or acquaintance; and 3) physical attacks by a stranger or acquaintance.

Crime survey. Participants ($n = 54$) completing the crime survey were informed on the consent form that the survey was about people's perception of crime and experiences of criminal victimization. Three sections of questions (adapted from the 1999 General Social Survey [GSS]; Statistics Canada, 2000) asked about: 1) feelings of safety from crime and participants' attempts to make themselves feel safer; 2) if participants have been victims of vandalism; and 3) attacks by a stranger or acquaintance.

After completing the demographics and first three sections of the survey, all participants were presented with the same partner violence questions as in Study 1.

Data Analytic Approach

Research questions concerning rates of violence were tested using logistic regression models to determine the effects of the predictor variables on the odds of having experienced violence in a romantic relationship. Survey framing (with the family life and relationships framing as the indicator category) was entered on the first block, followed by gender on the second block and the gender-by-survey framing interaction on the third block. Outcome/criterion variables were receipt of partner violence ever in the past and in the last 12 months.

Research questions concerning severity of violence were tested using two-way ANOVA models with survey framing and gender (and their interaction) as independent

variables. Dependent variables were severity of partner violence ever in the past and in the last 12 months.

I checked for associations between demographic variables (ethnicity, age and relationship status [currently in a relationship or not]) and reports of partner violence. If any demographic variables were related to reports of partner violence, I conducted follow up analyses controlling for these.

Results

Results are presented separately for rates of violence and severity of violence, and for the two time-frames assessed. There were no associations between demographic variables and reports of partner violence.

Violence Rates

Overall, 39% of participants reported having been recipients of partner violence ever in the past. Fewer participants (20%) reported being the recipients of partner violence in the last year.

Ever in the Past

Reported rates of violence ever in the past are shown in Table 7 and the top panel of Figure 3. A quarter (25%) of participants in the family life and relationships framing condition reported receipt of partner violence ever in the past, as did 63% of those in the personal safety framing condition and 32% of those in the crime framing condition.

Table 7.**Study 2: Rates of Violence Ever in the Past and in the Last 12 Months by Survey Framing and Participant Gender**

Survey Framing	Ever in the Past			Last 12 Months		
	Men N (%)	Women N (%)	Overall N (%)	Men N (%)	Women N (%)	Overall N (%)
Family Life and Relationships	4/14 (26.7)	7/29 (24.1)	11/44 (25.0)	3/15 (20.0)	2/29 (6.9)	5/44 (11.4)
Personal Safety	7/14 (50.0)	20/29 (69.0)	27/43 (62.8)	6/14 (42.9)	10/29 (34.5)	16/43 (37.2)
Crime	9/21 (42.9)	8/33 (24.2)	17/54 (31.5)	5/21 (23.8)	2/33 (6.1)	7/54 (13.0)

Results for the logistic regression predicting rates of violence ever in the past are shown in Table 8. A test of the survey framing model versus a model with intercept only was statistically significant, $\chi^2(2, N = 141) = 15.07, p = .001$, indicating that survey framing did reliably distinguish between those participants reporting receipt of violence ever in the past and those not. Examination of the Wald statistic indicated that the personal safety survey framing had a significant partial effect. The odds ratio for personal safety indicated that, contrary to predictions, participants in this survey framing condition were five times as likely as those in the family life framing condition to report receipt of partner violence. The partial effect for the crime framing was not significant.

Figure 3.

Study 2: Prevalence of Receipt of Partner Violence Ever in the Past and in the Last 12 Months by Survey Framing

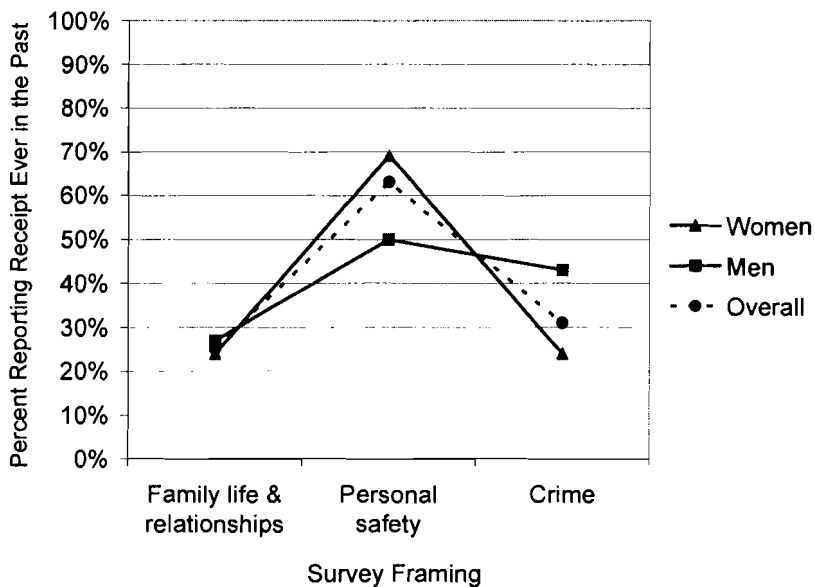


Table 8.**Study 2: Logistic Regression Models Using Survey Framing, Gender and Gender-by-Survey Framing Interaction to Predict Receipt of Partner Violence Ever in the Past**

	Survey Framing Model			Survey Framing and Gender Model			Full Model		
	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)
Survey Framing									
Family Life (FL)	--	--	--	--	--	--	--	--	--
Personal Safety (PS)	1.62 (.47)	11.92***	5.06 (2.02, 12.71)	1.63 (.47)	11.94***	5.08 (2.02, 12.76)	1.01 (.79)	1.63	2.75 (.58, 12.98)
Crime (C)	.32 (.46)	.50	1.38 (.57, 3.36)	.32 (.46)	.48	1.37 (.56, 3.35)	.72 (.73)	.98	2.06 (.49, 8.65)
Gender ^a									
				-.12 (.38)	.11	.88 (.42, 1.87)	-.13 (.73)	.03	.88 (.21, 3.64)
Framing * Gender									
PS vs. FL * Gender							.93 (.99)	.89	2.54 (.37, 17.61)
C vs. FL * Gender							-.72 (.94)	.58	.49 (.08, 3.09)
Model χ^2									
	15.07			15.18			18.58		
(df)									
	2			3			5		
p									
	.001			.002			.002		
R ² ^b									
	.137			.138			.167		

^a Male = 0. ^b R² refers to Nagelkerke R². *** $p \leq .001$.

Adding gender to the model in the second block did not significantly improve model fit, $\chi^2_{\text{change}}(1, N = 141) = .11, p = .746$, suggesting that gender did not reliably distinguish between those participants reporting receipt of violence ever in the past and those not. This was confirmed by examination of the Wald statistic and odds ratio, which showed that holding survey framing constant, men and women were about equally likely to report partner violence.

Finally, adding the gender-by-survey framing interaction to the model in the third block did not significantly improve model fit, $\chi^2_{\text{change}}(2, N = 141) = 3.40, p = .183$, indicating, contrary to predictions, no gender-by-survey framing interaction effect on reports of receipt of violence ever in the past.

Last 12 Months

Results for rates of violence in the last 12 months are shown in Table 7 and the bottom panel of Figure 3. Eleven percent of participants in the family life and relationships framing condition reported receipt of partner violence in the last 12 months, as did 37% of those in the personal safety framing condition and 13% of those in the crime framing condition.

Results for the logistic regression predicting rates of violence in the last 12 months are shown in Table 9. A test of the survey framing model versus a model with intercept only was statistically significant, $\chi^2(2, N = 141) = 10.98, p = .004$, indicating that, as for ever in the past, survey framing did reliably distinguish between those participants reporting receipt of violence in the last 12 months and those not. Examination of the Wald statistic indicated that the personal safety survey framing had a significant partial effect. The odds ratio for personal safety indicated that participants in this survey framing condition were four and a half times as likely as those in the family life framing condition to report receipt of partner violence. The partial effect for the crime framing condition was not significant.

Table 9.**Study 2: Logistic Regression Models Using Survey Framing, Gender and Gender-by-Survey Framing Interaction to Predict Receipt of Partner Violence in the Last 12 Months**

	Survey Framing Model			Survey Framing and Gender Model			Full Model		
	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)
Survey Framing									
Family Life (FL)	--	--	--	--	--	--	--	--	--
Personal Safety (PS)	1.53 (.57)	7.21**	4.62 (1.51, 14.13)	1.60 (.58)	7.55**	4.95 (1.58, 15.50)	1.10 (.84)	1.70	3.00 (.58, 15.61)
Crime (C)	.15 (.62)	.06	1.16 (.34, 3.95)	.11 (.63)	.03	1.11 (.32, 3.84)	.22 (.82)	.07	1.25 (.25, 6.29)
Gender ^a				-.91 (.46)	3.96*	.40 (.16, .99)	-1.22 (.98)	1.55	.30 (.04, 2.01)
Framing * Gender									
PS vs. FL * Gender							.86 (1.18)	.53	2.37 (.23, 24.04)
C vs. FL * Gender							-.36 (1.32)	.08	.70 (.05, 9.30)
Model χ^2	10.98			14.97			16.36		
(df)	2			3			5		
p	.004			.002			.006		
R ^{2b}	.119			.160			.174		

^a Male = 0. ^b R² refers to Nagelkerke R². *** $p \leq .001$, ** $p \leq .01$, * $p \leq .05$.

Adding gender to the model in the second block significantly improved model fit, $\chi^2_{\text{change}}(1, N = 141) = 3.99, p = .046$, suggesting that gender did reliably distinguish between those participants reporting receipt of violence in the last 12 months and those not. This was confirmed by examination of the Wald statistic and odds ratio, which showed that, holding survey framing constant, women were less than half as likely to report partner violence than were men.

Finally, adding the gender-by-survey framing interaction to the model in the third block did not significantly improve model fit, $\chi^2_{\text{change}}(2, N = 141) = 1.39, p = .498$, indicating, contrary to predictions, no gender-by-survey framing interaction effect on reports of receipt of violence in the last 12 months.

Severity of Violence

On average, participants reported having received more acts of violence ever in the past ($M = 1.30$; $SD = 2.27$) than in the last 12 months ($M = .60$; $SD = 1.52$).

Ever in the Past

Mean levels of severity of violence ever in the past are shown in Table 10 and the top panel of Figure 4. Participants in the family life framing condition reported receipt of an average of .59 acts of partner violence ever in the past; those in the personal safety framing condition reported receipt of an average of 2.49 acts of partner violence; and those in the crime framing condition reported receipt of an average of .94 acts of partner violence ever in the past.

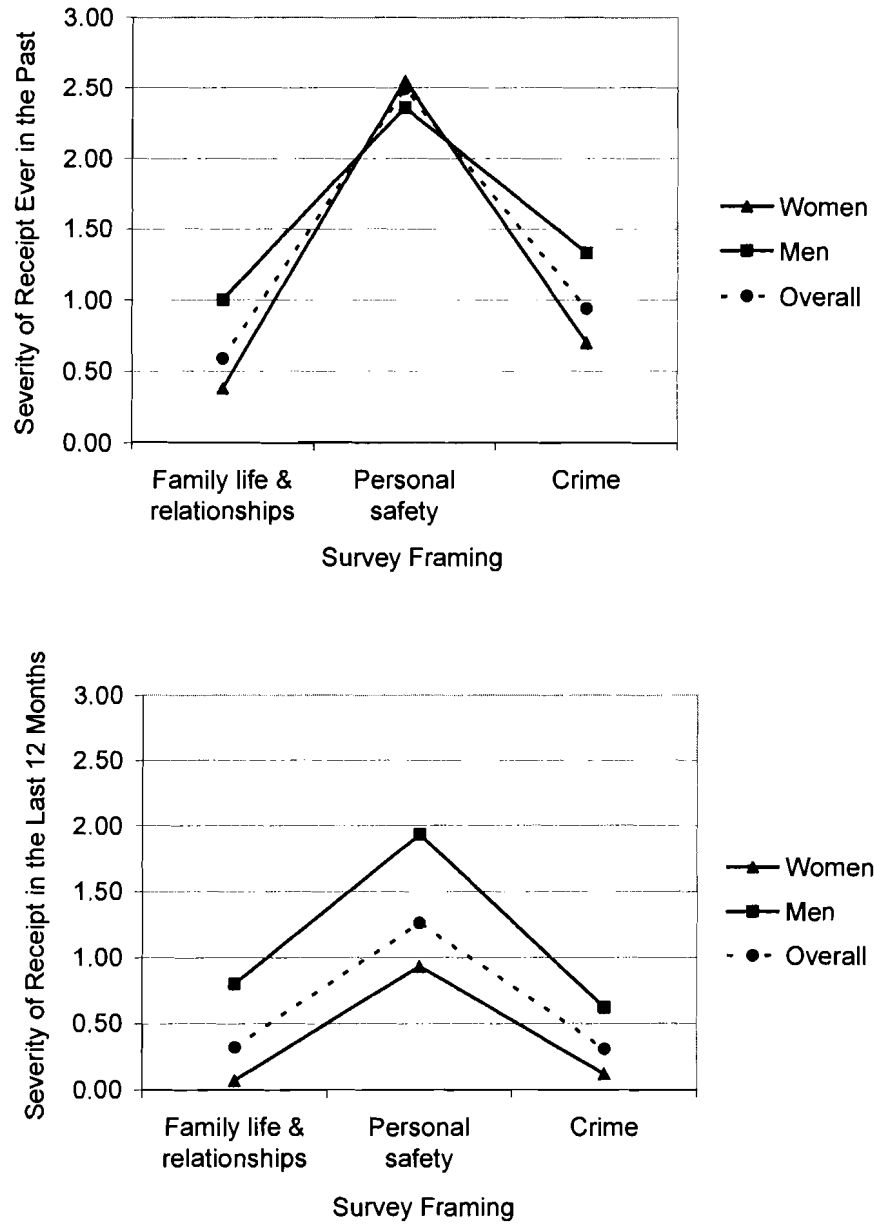
Table 10.

Study 2: Severity of Violence Ever in the Past and in the Last 12 Months by Survey Framing and Participant Gender

Survey Framing	Ever in the Past			Last 12 Months		
	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Overall <i>M (SD)</i>	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Overall <i>M (SD)</i>
Family Life & Relationships	1.00 (2.07)	.38 (.78)	.59 (1.37)	.80 (2.01)	.07 (.26)	.32 (1.22)
Personal Safety	2.36 (2.82)	2.55 (2.94)	2.49 (2.87)	1.93 (2.84)	.93 (1.56)	1.26 (2.08)
Crime	1.33 (2.31)	.70 (1.74)	.94 (1.99)	.62 (1.36)	.12 (.55)	.31 (.97)

Figure 4.

Study 2: Severity of Receipt of Partner Violence Ever in the Past and in the Last 12 Months by Survey Framing



The ANOVA model indicated that there was a significant main effect of survey framing for number of acts of violence received ever in the past, $F(2, 135) = 7.46, p = .001$. Specifically, contrary to predictions, participants reported receiving the greatest number of violent acts in the personal safety condition and the fewest number of violent acts in the family life and crime conditions. Post-hoc analyses using Tukey's HSD indicated that the differences in severity between the personal safety and other two conditions were significant (family life vs. personal safety ever in the past $HSD = 1.90, p < .001$; crime vs. personal safety ever in the past $HSD = 1.54, p = .002$). There was no significant main effect for gender ($F(1, 135) = .86, p = .357$) and no significant gender-by-survey framing interaction ($F(2, 135) = .49, p = .614$).

Last 12 Months

Mean levels of severity of violence in the last 12 months are shown in Table 10 and the bottom panel of Figure 4. Participants in the family life framing condition reported receipt of an average of .32 acts of partner violence in the last 12 months; those in the personal safety framing condition reported receipt of an average of 1.26 acts of partner violence; and those in the attacks framing condition reported receipt of an average of .31 acts of partner violence in the last 12 months.

The ANOVA model indicated that there was a significant main effect of survey framing for severity of violence in the last 12 months, $F(2, 135) = 6.93, p = .001$. Specifically, contrary to predictions, reported severity of partner violence was highest in the personal safety condition and lowest in the family life and relationships and crime conditions. Post-hoc analyses using Tukey's HSD indicated that the differences in

severity between the personal safety and other two conditions were significant (family life vs. personal safety last 12 months $HSD = .94, p = .009$; crime vs. personal safety last 12 months $HSD = .94, p = .006$). Across conditions, men reported receiving, on average, more acts of violence in the last 12 months than did women ($M_s = 1.04$ and $.36$ for men and women, respectively), $F(1, 135) = 8.46, p = .004$. There was no significant gender-by-survey framing interaction ($F(2, 135) = .33, p = .719$).

Discussion

The present findings suggest that survey framing did meaningfully influence reported levels of partner violence (both rates and severity), but that it did not have a differential impact by gender. Across time-frames and for both women and men, reports of partner violence were highest in the personal safety condition and lowest in the family life and crime conditions.

This unexpected pattern of findings is difficult to explain. It is possible that the combination of the family life survey framing and conflict question framing led to decreased reports of partner violence for the same reasons as outlined in Study 1 (i.e., a contrast effect between survey and question framing for the personal safety and crime survey framing conditions, but not for the family life survey framing condition). Simultaneously, the crime survey framing may have led to decreased reports because participants did not consider their experiences to be a crime, resulting in the highest levels of partner violence reported with the personal safety survey framing. However, given that the personal safety and crime surveys were very similar to one another

(especially compared to the family life survey), it is unlikely this can adequately account for the differences found between these two framings.

Taken together, the two studies suggest that survey framing has a greater impact on reports of partner violence than does question framing. Survey framing significantly affected both reported rates and severity of violence across the two time-frames assessed, and had a similar effect for women and men. The finding that reported levels of violence were highest using the personal safety framing and lowest using the family life and crime framings was, however, contrary to predictions. In contrast, question framing only had a significant effect on reports of severity of partner violence in the last 12 months, with highest levels of reported violence in the attacks and violence framings and lowest in the conflict framing, a pattern contrary to predictions. There was also little evidence that question framing had a differential impact by gender: The effect of question framing was stronger for men's reports than for women's reports only for rates of violence in the last 12 months.

The findings from Studies 1 and 2 suggest that perhaps "un-confounding" survey and question framing has unanticipated effects. Perhaps pairing a particular survey framing with a different question framing creates an unexpected contrast between the two types of framing. If this unexpected contrast causes respondents to think more carefully about their responses, it could lead to increased reports of partner violence (cf. Bradburn, 1983). Along similar lines, Ramirez and Straus (2006) found that presenting questions about partner violence in a random order lead to higher reported rates than presenting the

questions in a logical sequence.⁵ If such a contrast effect occurs when survey and question framing are paired arbitrarily, it could account for the pattern of rates and means found in Study 1: Reported levels of partner violence were higher in the two conditions where survey and question framing were contrasted. Similarly, in Study 2, levels of partner violence were lowest using the family life and relationships survey framing where no such contrast occurs. This contrast explanation cannot, however, adequately explain Study 2 findings. If it were simply that the contrast between survey and question framing lead to higher reported levels of violence, then the levels for the crime survey framing should have been elevated, just as they were for the personal safety survey framing.

The findings from Studies 1 and 2 were unexpected, and suggest that there is something about crossing survey and question framing that has unanticipated effects on reports of partner violence. Consequently, I conducted another study to help clarify these unexpected findings.

⁵ In a similar study, Vega and O'Leary (2006) found that presenting questions in a random order versus in a logical sequence did not significantly influence reported rates of partner violence. However, participants in Vega and O'Leary's study completed the violence questions via computer, whereas participants in Ramirez and Straus' (2006) study completed a paper-and-pencil questionnaire in a classroom setting. Of note, the prevalence rate of violence obtained by Vega and O'Leary was 70% higher than that obtained by Ramirez and Straus (2006). It is possible that the different methods of questionnaire administration and data collection were responsible for the differences in prevalence rates and question order effects between studies.

Study 3: Survey Form

Study 3 examined the effect of survey form on reported levels of partner violence. Survey framing and question framing were paired in the same way as typically seen in community surveys (family life and relationships survey framing with conflict question framing, personal safety survey framing with violence question framing, crime survey framing with attacks question framing) and participants were randomly assigned to one of three survey forms.

Research questions in Studies 1 and 2 about the effects of question and survey framing were based on a presumption of certain main effects observed in large community surveys. In particular, past studies would suggest that reported rates and severity of violence would be highest using a family life and relationships survey framing and lowest using a crime survey framing, and that men's reports of violence would be lower than women's reports when using a crime survey framing. The findings from Studies 1 and 2, however, call this presumption into question.

Prior surveys, on which predictions in Studies 1 and 2 were based, used representative community samples. In contrast, Studies 1 and 2 used student samples. Although some prior surveys have focused specifically on students (e.g., White & Koss, 1991), those studies used a family life and relationships-conflict survey form. I was unable to locate any surveys using a crime-attacks or personal safety-violence survey

form with a student sample. Consequently, it is not clear whether the pattern of survey findings observed with community surveys would replicate in a student sample. Thus, one aim of Study 3 was to confirm whether the pattern observed with community samples replicates in a student sample.

A second aim of Study 3 was to clarify findings of Studies 1 and 2. To the extent that contrast effects were at play in these studies, the crime-attacks and personal safety-violence survey forms (with no contrast between question and survey framing) should attenuate levels of reported violence relative to the family life-conflict survey form.

Research Questions

3a. Do reported levels of partner violence differ depending on survey form?

Previous findings based on large community surveys suggest that participants will report highest rates and severity of violence with the family life-conflict form and lowest rates and severity with the crime-attacks form, with participants completing the personal safety-violence form reporting levels in between the two. However, the findings of Studies 1 and 2 call into question this expectation. Therefore, I made no directional hypotheses as to how survey form may influence violence reports.

3b. Are the effects of survey form moderated by gender?

Based on prior research and theory, I would have expected survey form to have a stronger effect on men's than women's reports of partner violence. However, Studies 1 and 2 provided little evidence that gender moderated framing effects. Therefore, I did not expect to find a moderating effect of gender in Study 3.

Method

Participants

Criteria for inclusion were self-identification as heterosexual with romantic relationship experience ever in the past. The final sample consisted of 418 participants (73% women, 27% men) with a mean age of 24.1 years ($SD = 8.1$, $Range = 16-64$). Most participants (71%) were currently in a romantic relationship, and a further 17% had been in a relationship in the past year. For participants currently in a romantic relationship, the reported relationship status was as follows: 59% dating, 19% cohabiting, 18% married, and 4% other.⁶ The ethnic composition of the sample was primarily White/Caucasian (37%) and Chinese/East Asian (26%); respondents also self-identified as Canadian (11%), South Asian (4%), Middle Eastern (4%), Southeast Asian (3%), of Mixed ethnic origin (2%), and Other (5%). A number of participants (7%) did not indicate an ethnic background. There were no differences on demographic variables across survey form conditions.

Procedure

Study 3 participants completed an online survey. Participants were recruited via an email sent to undergraduates in a number of departments across campus inviting them to participate in a survey about important life experiences. The email contained a link allowing students to access the online questionnaires. Other than the fact that participants

⁶ All analyses were redone with only those participants who had been in a relationship in the last year and with those currently in a romantic relationship. The pattern of results was generally consistent with what I report here.

had no direct contact with the researcher, the procedure for Study 3 was the same as for Studies 1 and 2. In order to reduce the possibility of multiple responding, participants were asked whether they had completed this or a similar survey before. Those indicating that they had done so, or who reported that they did not know if they had completed such a survey before, were not included in the final sample.

Survey Form Manipulation

Survey framing and question framing were paired in the same way as typically seen in the literature: The family life survey framing was paired with the conflict question framing (FLC), the personal safety survey framing was paired with the violence question framing (PSV), and the crime survey framing was paired with the attacks question framing (CA). As in Study 2, survey framing was manipulated on the consent form and by varying the three sections of questions preceding the partner violence questions. As in Study 1, question framing was manipulated by changing the wording preceding the partner violence questions. Participants were randomly assigned to survey form (FLC, $n = 125$; CA, $n = 124$; PSV, $n = 169$).

Data Analytic Approach

Research questions concerning rates of violence were tested using logistic regression models to determine the effects of the predictor variables on the odds of having experienced violence in a romantic relationship. Survey form (with FLC survey form as the indicator category) was entered on the first block, followed by gender on the second block and the gender-by-survey form interaction on the third block.

Outcome/criterion variables were receipt of partner violence ever in the past and in the last 12 months.

Research questions concerning severity of violence were tested using two-way ANOVA models with survey form and gender (and their interaction) as independent variables. Dependent variables were severity of partner violence ever in the past and in the last 12 months.

I checked for associations between demographic variables (ethnicity, age and relationship status [currently in a relationship or not]) and reports of partner violence. If any demographic variables were related to reports of partner violence, I conducted follow up analyses controlling for these.

Results

Results are presented separately for rates of violence and severity of violence, and for the two time-frames assessed. Age was positively correlated with reported rates ($r_{pb} = .10$) and severity ($r = .13$) of violence ever in the past, and negatively correlated with reported rates ($r_{pb} = -.13$) and severity ($r = -.13$) of violence in the last 12 months. Relationship status was associated with severity of violence in the last 12 months: Participants currently in a relationship reported a greater number of acts of violence than those not currently in a relationship ($M_s = .43$ and $.18$ acts, respectively).

Violence Rates

Overall, 36% of participants reported having been recipients of partner violence ever in the past and 15% reported being the recipients of partner violence in the last year.

Ever in the Past

Reported rates of violence ever in the past are shown in Table 11 and the top panel of Figure 5. About a quarter (26%) of participants completing the family life-conflict survey form reported receipt of partner violence ever in the past, as did 44% of those completing the personal safety-violence survey form and 36% of those completing the crime-attacks survey form.

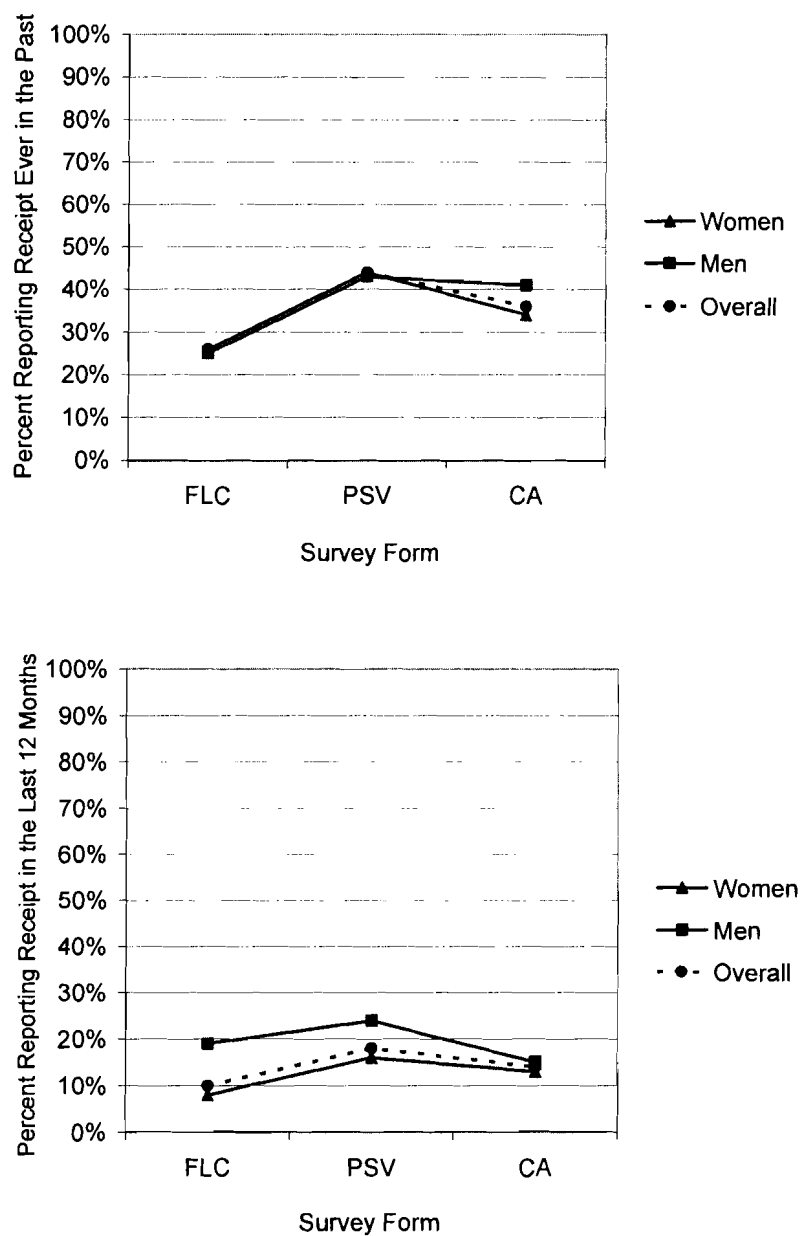
Table 11.

Study 3: Rates of Violence Ever in the Past and in the Last 12 Months, by Survey Form and Participant Gender

Survey Form	Ever in the Past			Last 12 Months		
	Men <i>N</i> (%)	Women <i>N</i> (%)	Overall <i>N</i> (%)	Men <i>N</i> (%)	Women <i>N</i> (%)	Overall <i>N</i> (%)
Family Life-Conflict	8/32 (25.0)	24/93 (25.8)	32/125 (25.6)	6/32 (18.8)	7/93 (7.5)	13/125 (10.4)
Personal Safety-Violence	20/46 (43.5)	54/123 (43.9)	74/169 (43.8)	11/46 (23.9)	20/123 (16.3)	31/169 (18.3)
Crime-Attacks	14/34 (41.2)	31/90 (34.4)	45/124 (36.3)	5/34 (14.7)	12/90 (13.3)	17/124 (13.7)

Figure 5.

Study 3: Prevalence of Receipt of Partner Violence Ever in the Past and in the Last 12 Months by Survey Form



Note: FLC = family life-conflict; PSV = personal safety-violence; CA = crime-attacks.

Results for the logistic regression predicting rates of violence ever in the past are shown in Table 12. A test of the survey form model versus a model with intercept only was statistically significant, $\chi^2(2, N = 418) = 10.52, p = .005$, indicating that survey form did reliably distinguish between those participants reporting receipt of violence ever in the past and those not. Examination of the Wald statistic indicated that the PSV survey form had a significant partial effect. The odds ratio for PSV indicated that participants completing this survey form were over two times as likely as those completing the FLC form to report receipt of partner violence. The Wald statistic also indicated that the CA form had a non-significant (though marginal) partial effect.

Adding gender to the model in the second block did not significantly improve model fit, $\chi^2_{\text{change}}(1, N = 418) = .095, p = .758$, suggesting that gender did not reliably distinguish between those participants reporting receipt of violence ever in the past and those not. This was confirmed by examination of the Wald statistic and odds ratio, which showed that holding survey form constant, men and women were about equally likely to report partner violence.

Finally, adding the gender-by-survey form interaction to the model in the third block did not improve model fit, $\chi^2_{\text{change}}(2, N = 418) = .39, p = .821$, indicating no gender-by-survey form interaction effect on reports of receipt of violence ever in the past.⁷

⁷ When controlling for age, the pattern of findings was consistent with that reported here.

Table 12.**Study 3: Logistic Regression Models Using Survey Form, Gender and Gender-by-Survey Form Interaction to Predict Receipt of Partner Violence Ever in the Past**

	Survey Form Model			Survey Form and Gender Model			Full Model		
	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)
Survey Form									
Family Life-Conflict (FLC)	--	--	--	--	--	--	--	--	--
Personal Safety-Violence (PSV)	.82 (.26)	10.11***	2.26 (1.37, 3.75)	.82 (.26)	10.08*	2.26 (1.37, 3.74)	.84 (.51)	2.74†	2.31 (.86, 6.21)
Crime-Attacks (CA)	.50 (.28)	3.31†	1.66 (.96, 2.85)	.50 (.28)	3.29†	1.65 (.96, 2.85)	.74 (.54)	1.91	2.10 (.73, 6.01)
Gender ^a				-.07 (.23)	.10	.93 (.59, 1.47)	.04 (.47)	.01	1.04 (.41, 2.63)
Form * Gender									
PSV vs. FLC * Gender							-.03 (.59)	.002	.98 (.31, 3.08)
CA vs. FLC * Gender							-.33 (.63)	.28	.72 (.21, 2.46)
Model χ^2	10.52			10.62			11.01		
(df)	2			3			5		
p	.005			.014			.051		
R ^{2b}	.034			.034			.036		

^a Male = 0. ^b R² refers to Nagelkerke R². *** $p \leq .001$. * $p \leq .05$. † $p \leq .10$.

Last 12 Months

Results for rates of violence in the last 12 months are shown in Table 11 and the bottom panel of Figure 5. Overall 10% of participants completing the family life-conflict survey form reported receipt of partner violence in the last 12 months, as did 18% of those completing the personal safety-violence survey form and 14% of those completing the crime-attacks survey form.

Results for the logistic regression models predicting rates of violence in the last 12 months are shown in Table 13. A test of the survey form model versus a model with intercept only was not statistically significant, $\chi^2(2, N = 418) = 3.80, p = .150$, indicating that, contrary to predictions, survey form did not reliably distinguish between those participants reporting receipt of violence ever in the past and those not. Examination of the Wald statistic confirmed this, though there was a marginal partial effect for the PVS survey form.

Adding gender to the model in the second block did not significantly improve model fit, $\chi^2_{\text{change}}(1, N = 418) = 2.91, p = .088$, suggesting that gender did not reliably distinguish between those participants reporting receipt of violence in the last 12 months and those not. This was confirmed by examination of the Wald statistic, which indicated only a marginal, non-significant partial effect.

Finally, adding the gender-by-survey form interaction to the model in the third block also did not improve model fit, $\chi^2_{\text{change}}(2, N = 418) = 1.27, p = .530$, indicating no gender-by-survey form interaction effect on reports of receipt of violence in the last 12 months.⁸

⁸ When controlling for age, the pattern of findings was consistent with that reported here.

Table 13.**Study 3: Logistic Regression Models Using Survey Form, Gender and Gender-by-Survey Form Interaction to Predict Receipt of Partner Violence in the Last 12 Months**

	Survey Form Model			Survey Form and Gender Model			Full Model		
	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)	B (SE)	Wald	Odds Ratio (95% CI)
Survey Form									
Family Life-Conflict (FLC)	--	--	--	--	--	--	--	--	--
Personal Safety-Violence (PSV)	.66 (.35)	3.48†	1.94 (.97, 3.87)	.66 (.36)	3.41†	1.93 (.96, 3.87)	.31 (.57)	.29	1.36 (.45, 4.16)
Crime-Attacks (CA)	.31 (.39)	.64	1.37 (.63, 2.95)	.31 (.39)	.60	1.36 (.63, 2.94)	-.29 (.66)	.19	.75 (.20, 2.74)
Gender ^a				-.51 (.30)	3.02†	.60 (.34, 1.07)	-1.04 (.60)	3.02†	.35 (.11, 1.14)
Form * Gender									
PSV vs. FLC * Gender							.56 (.73)	.58	1.75 (.42, 7.38)
CA vs. FLC * Gender							.93 (.83)	1.25	2.53 (.50, 12.89)
Model χ^2	3.80			6.71			7.98		
(df)	2			3			5		
p	.150			.082			.157		
R ^{2b}	.016			.028			.033		

^a Male = 0. ^b R² refers to Nagelkerke R². † p ≤ .10.

Severity of Violence

On average, participants reported having received more acts of violence ever in the past ($M = 1.04$; $SD = 1.97$) than in the last 12 months ($M = .36$; $SD = 1.18$).

Ever in the Past

Mean levels of severity of violence ever in the past are shown in Table 14 and the top panel of Figure 6. Participants completing the family life-conflict survey form reported receipt of an average of .59 acts of partner violence ever in the past; those completing the personal safety-violence survey form reported receipt of an average of 1.25 acts of partner violence; and those completing the crime-attacks survey form reported receipt of an average of 1.22 acts of partner violence ever in the past.

Table 14.

Study 3: Severity of Violence Ever in the Past and in the Last 12 Months, by Survey Form and Participant Gender

Survey Form	Ever in the Past			Last 12 Months		
	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Overall <i>M (SD)</i>	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Overall <i>M (SD)</i>
Family Life-Conflict	.69 (1.49)	.56 (1.22)	.59 (1.29)	.56 (1.39)	.12 (.46)	.23 (.82)
Personal Safety-Violence	1.22 (2.02)	1.26 (2.20)	1.25 (2.15)	.48 (1.17)	.40 (1.24)	.42 (1.22)
Crime-Attacks	1.26 (2.55)	1.20 (2.10)	1.22 (2.22)	.53 (1.96)	.36 (1.15)	.40 (1.41)

The ANOVA model indicated there was a significant main effect of survey form for reports of severity of violence received ever in the past ($F(2, 412) = 3.29, p = .038$). Specifically, similar to the pattern of violence rates ever in the past, participants completing the PSV survey form reported the greatest number of violent acts and those completing the FLC survey form reported the fewest number of violent acts. Different from the pattern for violence rates, participants completing the CA survey form reported as many violent acts as those completing the PSV survey form. Post-hoc analyses using Tukey's HSD indicated that the differences in severity between the FLC and other two

survey forms were significant (FLC vs. PSV ever in the past $HSD = 0.66, p = .013$; FLC vs. CA ever in the past $HSD = 0.63, p = .032$). There was no significant effect of gender and no significant gender-by-survey form interaction for severity of receipt of partner violence ever in the past.⁹

Last 12 Months

Mean levels of severity of violence in the last 12 months are shown in Table 14 and the bottom panel of Figure 6. Participants completing the family life-conflict survey form reported receipt of an average of .23 acts of partner violence in the last 12 months; those completing the personal safety-violence survey form reported receipt of an average of .42 acts of partner violence; and those completing the crime-attacks survey form reported receipt of an average of .40 acts of partner violence in the last 12 months.

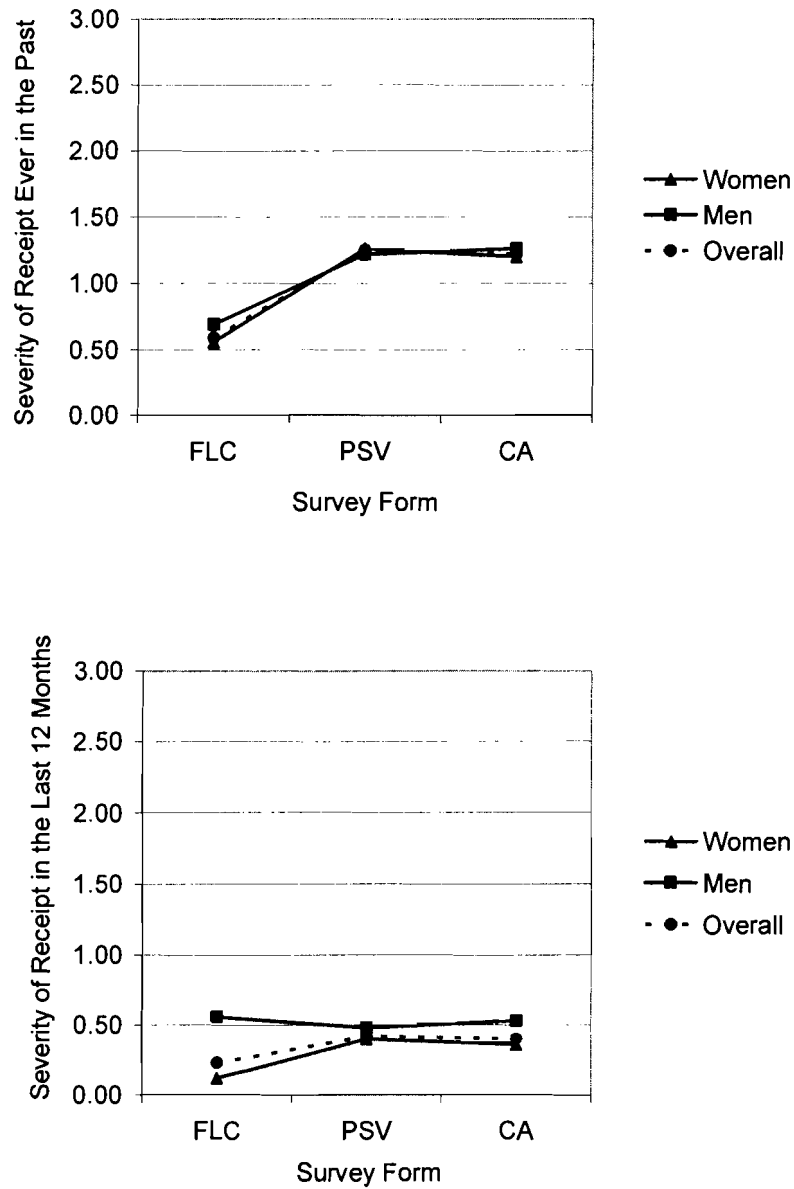
Results from the ANOVA analysis indicated that, although reported severity of violence was lower in the FLC condition than in the other two conditions, this effect was not significant. Further, there was no significant main effect of gender and no significant gender-by-survey form interaction for severity of receipt of partner violence in the last 12 months.¹⁰

⁹ When controlling for age, the pattern of findings was consistent with that reported here.

¹⁰ Follow up analyses controlling for age and relationship status revealed a significant main effect for gender. All other findings were consistent with those reported here.

Figure 6.

Study 3: Severity of Receipt of Partner Violence Ever in the Past and in the Last 12 Months by Survey Form



Note: FLC = family life-conflict; PSV = personal safety-violence; CA = crime-attacks.

Discussion

The present findings suggest that survey form had an effect on reported rates and severity of partner violence ever in the past. Specifically, participants reported highest rates and severity of violence using the PSV survey form and lowest rates and severity of violence using the FLC survey form, with those completing the CA survey form reporting rates and mean severity of violence between the other two. Although the pattern of rates and means was similar for reports of violence in the last 12 months, there were no significant effects for this time-frame.

The pattern of highest rates and means of partner violence reported using the PSV survey form is consistent with findings from Study 2, which showed that the personal safety survey framing yielded highest rates and severity of partner violence. The pattern of low rates and levels of severity found using the FLC survey form is consistent with findings from both Studies 1 and 2, which showed a pattern of lowest levels reported using the conflict question framing (Study 1) and the family life and relationships survey framing (Study 2).

The overall pattern of findings from Study 3 suggests that the pattern of violence rates observed with community samples, where respondents report highest violence rates using FLC survey forms and lowest violence rates using CA survey forms, does not hold in a student sample. Further, the contrast explanation advanced for Studies 1 and 2 cannot account for the pattern of findings in Study 3. Survey framing and question framing were paired the way that is typically used in large surveys; consequently, there should be no

unexpected contrast between the two types of framing that could affect reports of partner violence.

It is not clear why the FLC survey form would result in the lowest rates and severity of violence. Researchers have argued that asking respondents about other relationship issues (e.g., decision-making, disagreements) and about psychological aggression makes it more acceptable for respondents to report aggressive acts by a partner (e.g., Straus, 1990). Perhaps students, who have been exposed to education about the problem of partner violence, do consider aggressive acts by a partner to be a crime or a matter of safety rather than a relational issue. Although this could explain why the reported levels using the CA or PSV survey forms were not lower than when using the FLC survey form, it does not explain why they were higher. It also does not explain why gender did not moderate the results. Because education campaigns about partner violence generally focus on violence against women, it would be reasonable to expect that survey form would have a greater effect on men's reports of receipt of partner violence than on women's reports.

General Discussion

I empirically investigated two features of partner violence surveys hypothesized to influence reported levels of partner violence: the introduction of the partner violence questions (question framing) and the overall context of the survey (survey framing). I also assessed whether gender moderated any framing effects.

Study 1 addressed the effect of three types of question framing (conflict, violence-in-relationships, and attacks) on reported rates and severity of violence ever in the past and in the last 12 months. Results indicated no reliable effect of question framing ever in the past; there was a significant question framing effect only for the 12-month time-frame. The pattern of findings for rates of violence and mean severity of violence was, however, consistent across three of four analyses. Counter to predictions, participants reported highest levels of violence in the attacks framing condition and lowest levels in the conflict framing conditions. Also counter to predictions, there was no reliable gender-by-question framing interaction.

Study 2 assessed the effect of three types of survey framing (family life and relationships, personal safety, and crime victimization) on reported rates and severity of violence ever in the past and in the last 12 months. Results showed a reliable effect of survey framing; however, the pattern of results was again counter to predictions. Participants reported highest levels of violence using the personal safety survey framing

and lowest levels using the family life and relationships survey framing. Again, counter to predictions, there was no significant gender-by-survey framing interaction.

The findings from Studies 1 and 2 were unexpected and inconsistent with findings from large community surveys. Based on previous studies, I predicted that reported rates and severity of violence would be highest using a conflict question framing and a family life and relationships survey framing, and lowest using an attacks question framing and a crime survey framing. Further, I predicted that framing would have a greater effect on men's reports of partner violence than on women's reports.

To clarify the unexpected findings from Studies 1 and 2, Study 3 assessed the effect of survey form on reports of partner violence. Survey framing and question framing were paired the way typically seen in community surveys (family life and relationships survey framing with conflict question framing, personal safety survey framing with violence question framing, and crime survey framing with attacks question framing). Results indicated a significant effect of survey form only for the ever time-frame, though the pattern of reported rates and mean severity of violence was consistent for the 12-month time-frame. Participants reported highest levels of violence using the personal safety-violence survey form and lowest levels using the family life-conflict survey form. There was no significant gender-by-survey form interaction.

Overall, the results from the three studies suggest that reports of receipt of partner violence are influenced primarily by survey framing and less so by question framing. The pattern of findings indicated that reported rates and severity of violence were generally

highest using the personal safety survey framing, whether contrasted with the conflict question framing (Study 2) or paired with the violence question framing as typically seen in community surveys (Study 3).¹¹ Perhaps the personal safety survey framing evokes general feelings of vulnerability in respondents, making it easier to recall acts of physical aggression by a partner. Research on mood-congruent memory indicates that people are better able to recollect autobiographical memories that match their current mood (Eich & Forgas, 2003; Kihlstrom, Eich, Sandbrand, & Tobias, 2000). If the personal safety survey framing evokes similar feelings of vulnerability to those experienced as the victim of a partner's aggression, then respondents may be more likely to recall experiences of partner aggression. This could explain why participants in the personal safety framing conditions reported higher levels of partner violence than did participants in other conditions.

The pattern of findings across Studies 2 and 3 also showed that reported rates and severity of violence were generally lowest using the family life survey framing and conflict question framing (these two framings were always paired, as is typically seen in community surveys). These framings were initially expected, based on theory and past research, to yield the highest levels of reported partner violence. Although some researchers in the partner violence field have expressed concern about potential over-reporting of partner violence when using the family life survey framing and conflict

¹¹ Reported levels of partner violence in the personal safety survey framing condition in Study 2 appear to be outliers when comparing conditions across the three studies. The rates and means are very high in this condition compared to other conditions (as much as 50% higher in some cases). The rates are also high compared to data from other studies of Canadian students (e.g., DeKeseredy & Schwartz, 1998). It is possible that these elevated rates and means are an artefact of the small sample size ($n = 43$). However, even if the rates and means in the personal safety framing condition in Study 2 were lower, the overall pattern of findings would remain consistent across studies.

question framing (see Hamby, 2005), the pattern of findings in the present studies is suggestive of under-reporting when using these framings. The pattern of findings showing lowest reported rates using the family life survey framing and conflict question framing could be explained by contrast effects between survey and question framing or by the specific question framing wording, though neither explanation is fully able to account for all the findings across studies.

Contrast effects created by arbitrarily pairing a particular survey framing with a different question framing could trigger more careful consideration of the partner violence items and thus more accurate reporting, leading to higher reported levels of violence. The lack of contrast effects in the conflict question framing condition in Study 1 could account for the pattern of findings showing lowest levels in this framing condition relative to the attacks and violence question framing conditions for the 12-month time-frame. The lack of contrast effects in the family life survey framing condition in Study 2 could also account for the pattern of findings showing lowest levels of violence in this framing condition relative to the crime and personal safety survey framing conditions. Contrast effects cannot, however, account for Study 3 findings because there was no contrast between question and survey framing. If lack of contrast effects were responsible for the lower rates and means seen in the conflict question framing condition and in the family life survey framing condition, then in Study 3 the rates and mean severity reported using the personal safety-violence and crime-attacks survey forms should have been attenuated relative to those obtained using the family life-conflict survey form.

The wording of the conflict question framing may have served to attenuate reported levels of partner violence for the family life-conflict survey form. Participants completing the family life-conflict survey form were asked about “physical conflicts” that may have taken place in their relationship(s), whereas participants completing the personal safety-violence and crime-attacks survey forms were asked to think about “violence” and “physical attacks” by a partner, respectively. Participants may have interpreted “physical conflicts” as referring to mutual fighting, or mutual/bidirectional violence, whereas the other two wordings may have suggested any violence aimed at the participant. Consequently, this “physical conflicts” wording may have cued respondents completing the family life-conflict survey form to report primarily acts of violence from situations where both they and their partner were being violent, resulting in lowered rates and mean severity due to underreporting of unidirectional violence (i.e., acts of violence that occurred when only their partner was violent). In contrast, participants completing the personal safety-violence and crime-attacks survey forms may have reported on acts of violence that occurred regardless of whether only their partner or both they and their partner were being violent. Research shows that about half of all partner violence in samples of young adults is bidirectional (e.g., Whitaker, Haileyesus, Swahn, & Saltzman, 2007). Therefore, this explanation could account for the pattern of findings showing lowest levels of partner violence with the conflict question framing condition relative to the attacks and violence question framing conditions for the 12 month time-frame (Study 1), and with the family life-conflict survey form relative to the crime-attacks and personal safety-violence survey forms (Study 3). This explanation cannot, however, account for

findings from Study 2, in which all survey framings were paired with the conflict question framing.

Although contrast effects between survey and question framing or the specific wording of the question framing could help account for the unexpected pattern of findings seen across the studies reported here, neither explanation on its own can do so fully. Introducing a degree of control and systematically manipulating survey and question framing resulted in the sample and mode of administration in the present studies necessarily differing from those typically seen in community surveys.

The student samples used in the present research differ from the community samples used in prior research in a number of ways. In particular, rates of partner violence are generally assessed using community or population surveys, some of which focus specifically on marital or marital/cohabiting relationships (e.g., NFVS, Straus & Gelles, 1986) and thus systematically exclude young adults. Although age and relationship status are confounded, it is also possible that married and cohabiting respondents differ from those who are dating. Participants with higher relationship commitment (i.e., those living together or married) may be more defensive when responding to questions about partner violence, accounting for the reduced rates in personal safety-violence and crime-attacks surveys found in prior research. Some community surveys do include younger or dating respondents, and some family life-conflict surveys indicate the breakdown of partner violence rates by age and relationship status. Unfortunately, I was able to find only one crime-attacks survey that included younger and/or unmarried participants and provided partner violence rates for these sub-

groups (NCVS, Bachman & Saltzman, 1995), and I was not able to identify any violence rates for young adults from personal safety-violence surveys. The limited information available does suggest, however, that rates for younger and/or dating respondents are higher in studies using family life-conflict surveys than those using crime-attacks surveys.

It is also possible that the different pattern of findings in the current studies relative to community surveys is due to differences in survey administration. In the present studies, I asked about only receipt of partner violence. Although crime-attacks and personal safety-violence surveys ask about only receipt of partner violence, most community family life-conflict surveys ask about both directions of violence (i.e., receipt and perpetration). Perhaps family life-conflict surveys tend to obtain the highest rates of partner violence because they ask about both directions of partner violence in the context of conflict. Asking about only one direction of violence, even in the context of conflict, implies a certain degree of blame (when reporting receipt of violence, blame of the partner) and may have attenuated violence reports by those participants completing the family life-conflict survey form in the present studies. This could explain why reported levels of partner violence using this survey form were not higher than reported levels using the crime-attacks and personal safety-violence survey forms. This explanation cannot, however, account for why reported levels using the family life-conflict survey form were lower than reported levels using the other two forms.

Further, the method of survey administration used in the current research differed from that used in most community surveys. Although some prior studies have used a

paper and pencil format or interviews to ask respondents about partner violence (e.g., Moffitt et al., 1997), the majority of community surveys are conducted via telephone. In contrast, the present surveys were administered online. The effect of changing survey administration format is difficult to gauge. Research indicates that self-administration reduces socially desirable responding compared to administration by an interviewer (Schwarz et al., 1991). Although some research indicates that self-administration of sensitive questions and administration of the same questions by an interviewer does not result in differential disclosure rates (e.g., Rosenbaum, Rabenhorst, Reddy, Fleming, & Howells, 2006), researchers generally find that self-administration of sensitive questions increases levels of reporting relative to interviewer-administration (Reddy et al., 2006; Tourangeau & Smith, 1996). Confidentiality vis-à-vis the researcher is greatest for self-administered surveys compared to telephone and face-to-face surveys (Schwarz et al., 1991). Consequently, respondents may feel more comfortable reporting sensitive information to a computer, as in the current surveys, than to a real person (cf Rosenbaum & Langhinrichsen-Rohling, 2006). If so, then reported levels of violence should in general be higher on self-administered surveys rather than on telephone surveys. Survey and question framing could still, however, influence reports of partner violence.

Perhaps if respondents' partners are present during a telephone survey or even if there are cues that remind respondents of their partner (these cues are likely if respondents are completing the survey in their home on the telephone), respondents could be more reluctant to report partner violence in a survey about crime or personal safety because this would be akin to saying that their partner is a criminal or makes them feel

unsafe. This could explain why, for community surveys administered via telephone, surveys using a crime-attacks or a personal safety-violence form find lower levels of reported partner violence than do surveys using a family life-conflict form. Because of greater perceived confidentiality vis-à-vis the researcher, administering a survey in an online format may reduce this constraint. It would then follow that using an online format for the crime-attacks and personal safety-violence forms would no longer suppress reported levels of partner violence. This explanation cannot, however, account for the lower levels of violence reported with the family life-conflict form than with the two other survey forms in the current online studies.

Finally, it could also be that reports of partner violence are influenced by who is conducting the survey, that is, the researcher's affiliation. Statistics Canada, a branch of the Canadian government, generally conducts crime and personal safety surveys in Canada. In contrast, university-affiliated researchers generally conduct family life and relationship surveys. Perhaps because of privacy concerns, people are more reluctant to tell the government than university researchers about partner violence, resulting in lowered reporting on crime and personal safety surveys. Norenzayan and Schwarz (1999) demonstrated that participants respond differently on the same survey depending on the name of the organization listed on the letterhead. When completing a questionnaire printed on letterhead from an "Institute of Personality Research," participants' explanations for a mass murder they read about focused on personality variables; in contrast, when the questionnaire was printed on letterhead from an "Institute of Social Research" their explanations focused on social determinants of homicide.

The goal of the present research was to test the impact of different survey formats on reports of partner violence, not to assess rates of violence in the particular student population under study. Thus, no attempt was made to obtain a representative sample of students. However, this research does raise the question of what we can conclude about actual rates of partner violence in students' dating relationships. I would generally assume (as is done in the field) that higher reported rates are more accurate than lower rates (assuming subsamples are drawn from the same population) because people are likely to under-report partner violence for a variety of reasons (e.g., recall problems, social desirability), not to over-report violence (e.g., Archer, 1999).

Averaging across studies, 37% of participants reported receipt of partner violence ever in the past and 20% reported violence in the last 12 months. Reported rates in the family life-conflict conditions (averaging 30% ever in the past and 13% in the past 12 months) tended to be lower than rates in the other framing conditions and to be lower than rates seen in other student samples. In contrast, reported rates in the other framing conditions (averaging 42% ever in the past and 22% in the last 12 months) were in line with rates found in other student samples with varying methods of survey administration (though most use a format similar to the family life-conflict one used here). In the largest and broadest study of college students available, Straus (2004) reported that across 31 universities in 16 countries, the median rate of partner violence in the past year was 29%. Thus, comparisons of rates observed in the current samples with previously reported rates in similar populations also suggest that the family life framing attenuated violence reports. Moreover, those framings that I predicted would attenuate rates of partner

violence (attacks and violence question framings, and crime and personal safety survey framings) did not appear to do so relative to rates reported in the literature. These framings also did not have a differential impact by gender on reports of partner violence. In conclusion, in student samples, reported violence rates (including similarity of rates for women and men) appear to be reasonably consistent across studies using differing methods of framing and administering questions about partner violence.

Conclusions

Community surveys yield different estimates of the prevalence of partner violence: Some surveys find relatively high rates of partner violence and others find relatively low rates of partner violence. Further, some surveys find that victims of partner violence are overwhelmingly women and others indicate that women and men are victimized at similar rates. Although researchers have theorized about reasons for differing prevalence rates of partner violence, the issue has not been systematically investigated. Therefore, I addressed two possible explanations for these disparate findings: differences in the way surveys introduce partner violence questions (question framing) and differences in the context of the surveys themselves (survey framing). Overall, my findings suggest that reported levels of partner violence do differ by survey form, and that survey framing has a stronger effect than does question framing. Thus, it appears that framing of surveys asking about partner violence is important. However, the pattern of findings in the current studies was unexpected and there was no differential effect of question or survey framing on men's and women's reports of partner violence.

Consequently, the obvious explanations of survey and question framing posited by researchers and investigated here cannot account for the variability in partner violence reports observed in the literature. Rather, there are likely a number of influences on reports of partner violence, ranging from specific factors, such as asking about only one or both directions of violence, to the broader context within which surveys of partner violence are conducted (e.g., method of administration, recruitment; see also Schwarz et al., 1991).

Ideally, to address potential reasons for differing prevalence rates of partner violence, a researcher would first replicate as closely as possible the surveys as seen in the literature and then investigate the effects of varying specific survey features. Unfortunately, replication of existing community surveys and control of various survey features are at cross-purposes. Replication necessarily means the surveys differ from each other in a number of potentially important ways, such as who the sample is, mode of administration, and who is conducting the research, among others. These differences make it difficult to know why different surveys obtain different rates of partner violence. In contrast, implementing a degree of control to make survey forms parallel, as I did in the present studies, necessarily means changing some features of the surveys with the result that they no longer replicate existing community surveys. Although this allows us to see the effect of varying certain survey features on reported violence rates, it makes it difficult to compare reported rates to those found in the literature.

These difficulties aside, future investigation examining reasons for differences in prevalence rates of partner violence would ideally involve a partnership between

government- and university-affiliated researchers. By including both government-affiliated researchers, who typically conduct crime and personal safety surveys, and university-affiliated researchers, who typically conduct family life surveys, such a partnership would allow for replication of existing community surveys within the same sample. Assuming such replication found differences in partner violence rates between surveys, follow up studies could address whether reported rates vary based on a number of factors. For instance, separate studies could investigate the effect of who is conducting the research (e.g., a crime survey conducted by government- versus university-affiliated researchers) or mode of administration (e.g., asking about only receipt of violence versus asking about both perpetration and receipt of violence).

Data about partner violence play a role in shaping public policy (Smith, 1994). For instance, rates of partner violence found by large surveys may be used to justify government funding of services for victims of partner violence. The results of the present studies suggest, however, that accurately measuring prevalence of partner violence is difficult because a number of features of the survey used can affect violence reports. Consequently, it may not be particularly useful for researchers to focus on determining the “true” prevalence of partner violence. We know partner violence exists and we know that the prevalence of partner violence is disturbingly high for both men and women. It may be more useful for researchers to focus on other issues, such as causes, consequences, and implications of partner violence. By focusing research efforts in these areas and developing a better understanding of the nature of violent relationships,

researchers can help policy makers make more informed decisions about public funding for social programs aimed at partner violence.

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